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AUTHOR Pfannenstiel, Judy C.; And Others
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ABSTRACT

This study (one portion of a larger study) was designed to identify the characteristics of Elementary and Secondary Education Act Title I basic skills programs in institutions for neglected or delinquent youth that appeared to be effective in producing student achievement gains. The study attempted to contrast small samples of more effective and less effective institutions to determine the sources of different outcomes with respect to achievement. It paid particular attention to measures of instructional exposure, including student class absences and the amount of exposure to reading-related and math-related tasks. Nine institutions were studied for a twelve week period. Data were collected through criterion and norm referenced achievement tests administered to students, classroom and site observations, attendance and enrollment records, and staff questionnaires. Tables of data are included and appended. Case studies of the nine institutions that participated in the study are also appended. (Author/MK)

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# THE SUBSTUDY OF EFFECTIVE PRACTICES

## National Evaluation of Title I Programs in State Institutions for Neglected or Delinquent Youth

VOLUME 4

Judy C. Pfannenstiel

with

Mary M. Sewell
J. Ward Keesling

June 1980

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Project Officer, Consultants and Resource Persons,
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Project Officer

Janice Anderson

Consultants and Resource Persons

Eric C. Brookens
Thomas J. Cook
Joyce DeMuth
LaMar T. Empey
Edmund J. Gubbins
Chester W. Harris
Tina M. Jackson
Jeremy J. Kollas
John B. Lampe
Robert L. Linn
William Lobosco
Patrick O. Mancini
Lawrence D. Penny
Melvin Seeman
Frances A. Tyler
Mildred R. Walton
James R. Wickman
Alan Woods

Project Co-Directors

J. Ward Keesling
Judy C. Pfannenstiel

Former Project Staff

Ted Bartell, former Project Director
Noreen M. Webb

Project Secretary

M. Helen Hernandez

Field Data Collection

James Hoyt, Manager of Field Data Collection
Claudia Browne
Cathie Feulner Farrar
Pat Fornash
Mel McCane
Mary Sewell
Brenda Ward

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## SUMMARY OF FINDINGS

- Students in institutional settings were found to attend an average of three hours of basic-skills instruction in reading and slightly less than three hours in mathematics per week. Large variations in average amounts of attended basic-skills time were found across institutions and within many institutions. Site-level averages ranged from 1.5 to 5.5 hours per week for reading, and 1 to 4 hours per week for mathematics. Discrepancies between scheduled time and attended time indicate that institutions experience difficulties in consistently delivering instructional services to students.

- The amount of scheduled time that was actually attended was reduced by student absences due primarily to the simultaneous scheduling of other institutional activities. Other reasons for absence were placement in lock-up (20 percent of absences), and factors beyond the control of administrative planning and operations (e.g. students reported sick), which accounted for less than 20 percent of absences. Average absence rates varied between 10 and 80 percent across sites.

- Of class time <u>scheduled</u> for basic-skills instruction, more than 50 percent was observed to be consumed by non-task-related activities. The proportion of task-related activities varied dramatically among sites, ranging from an average of approximately 30 percent to an average of almost 90 percent. Of class time <u>attended</u> for basic-skills instruction, an average of 37 percent of class time was observed to be non-task-related.

- Significant but modest correlations were obtained between instructional exposure (class attendance) and basic-skills achievement. The greater the amount of instructional exposure, the larger were the achievement gains for both reading and math. The magnitude of this correlation was augmented by the adjustment of instructional time to account for the estimated proportion of attended class time that is actually task-engaged.

- In terms of instructional characteristics, the greater the percentage of

students' class time that was engaged in the receipt of instruction from teachers or aides, the greater was their reading achievement. A second finding was that the fewer students assigned per teacher the higher were the achievement gains. Also, the lesser the amount of time students spent conversing with teachers about non-task-related topics, the greater were their gains.

- In classes where audiovisual equipment, textbooks and programmed instruction were utilized, teachers were observed to be disengaged from the instructional process, and reading and math gains were lower. When high-interest, low-skill-level materials were used, reading and math gains were larger.

- Although more positive student attitudes were not related to gains in achievement, changes in attitudes were significantly related. The greater the change towards more favorable reports of self-esteem, school involvement, perceptions of teacher supportiveness, and perceptions of the practical orientation of correctional education programs, the larger were the achievement gains.

- The greater the proportion of students' time that was engaged in the receipt of instruction and feedback, the less the amount of time devoted to practice or drill, and the higher the student ratings of teacher supportiveness, the higher was the proportion of student task-related activity.

## CHAPTER I. INTRODUCTION

The basic-skills deficiencies of delinquent or neglected youth confined in state institutions have been recognized as problems for many years. In an attempt to provide for the needs of educationally disadvantaged students, the Congress authorized an expenditure of Title I funds for students confined in state institutions.

Title I programs in state institutions for neglected or delinquent youth have now been operating for twelve years. In order to assess the effectiveness of these programs, The National Evaluation of Title I Programs for Neglected or Delinquent Youth in State Institutions was mandated by Congress. The evaluation had several objectives that have been accomplished and documented. The final objective of the evaluation, the description of the characteristics of instructional programs that are effective in changing student achievement levels, is the focus of the Substudy of Effective Practices and the subject of this report.

The first objective, accomplished during Phase I of the project, was to collect information about a nationally representative sample of Title I programs in state institutions and to present descriptions of these programs. These descriptions provided information about the ways in which Title I programs had been implemented, the number of participants served by Title I programs nationwide, and the extent to which the needs of eligible students were being served in state institutions for neglected children, delinquent youths, or young adult offenders.

The second objective of the evaluation was to measure the impact of the Title I program on basic reading and mathematics skills and the attitudes of the participants. Thirty randomly sampled and ten purposively selected institutions from the 100 that were visited during Phase I participated in this phase of the evaluation. Samples of students in the institutions were given achievement tests and functional literacy tests four times during the second year of the study. The data resulting from these test administrations were analyzed

for changes in basic skills over time, and also to determine whether greater achievement gains were associated with particular types of instructional characteristics. Groups of students not participating in Title I programs were also tested, so that the performances of participants and non-participants could be compared.

The third objective of the evaluation was to develop models and reporting forms that could be used by institutions and state agencies for their annual evaluation report to the U.S. Office of Education. On the basis of a review of existing reports on program evaluations available at the USOE, and the experience gained during the course of the evaluation, reporting models have been recommended to the USOE to provide standardized information on program operations, including the degree of success programs demonstrate in meeting Title I objectives. The ultimate goal of this model-development activity is to simplify and standardize evaluation and reporting procedures so that federal, state, and local program administrators can obtain comparable information on the Title I program and its nationwide impact.

The fourth objective was to conduct a follow-up study of students who had been released from institutions in order to describe their post-release experiences in terms of school entry (and the continuation of basic skills instruction), employment success, subsequent offense violations, and reinstitutionalization. A survey was conducted of the pre- and post-release services students receive. During this survey the impact of the receipt of these services upon student success in the community was assessed.*

While the impact evaluation had found that little or no growth in basic skills achievement occurred over a twelve-week instructional period, some sites were identified that did appear to be effective in producing achievement gains. The Substudy of Effective Practices was designed to identify the characteris-

*Summaries of the Phase I, Phase II, and post-release report may be obtained from the U.S. Office of Education, Office of Evaluation and Dissemination.

tics of such basic-skills programs. These characteristics are the subject of this report. The objectives and design of the Substudy of Effective Practices are given in the next chapter.

## CHAPTER II. OBJECTIVES AND DESIGN OF THE SUBSTUDY OF EFFECTIVE PRACTICES

### OBJECTIVES

The final objective of the evaluation, the description of those characteristics of instructional programs that are effective in changing student achievement levels, was developed as a result of findings of the impact evaluation. While the impact evaluation had found that, in general, little or no growth in basic-skills achievement occurred over a twelve-week instructional period, some sites were identified that did appear to be effective in producing achievement gains. In addition, the impact evaluation seemed to point to the uneven delivery of instructional services as a weakness of instructional programs in institutions.

During the conduct of the impact evaluation, the frequency and pervasiveness of interruptions to the delivery of basic-skills instruction within institutional contexts became evident as attempts were made to obtain repeated measures of student performance. A large proportion of the student sample in the impact study became unavailable for retesting because of other institutional activities or disciplinary procedures. Furthermore, it appeared that these factors were also related to a significant discrepancy that was found between the amount of instruction scheduled and the amount students were reported to receive. A reasonable hypothesis generated from the impact evaluation data is that the overall lack of growth in basic skills among students in institutions that receive Title I funds may be due to the fact that instructional time competes with other institutional activities. Thus, the actual delivery and/or receipt of basic-skills services may be limited. To test this hypothesis, the Substudy of Effective Practices was designed to obtain several carefully focused measures of instructional exposure, including student class absences and the amount of exposure to reading- and math-related tasks over a twelve-week period. Furthermore, observations were conducted at three points in time to verify reports of instructional exposure, including observations of the amounts of class time actually devoted to task-related and non-task-related activities. These measures were designed to provide a better assessment of the importance of instructional time than had been possible using the impact evaluation data.

The objectives of the Substudy of Effective Practices were to: 1) contrast small samples of more effective and less effective institutions to determine the sources of the different outcomes with respect to achievement, paying particular attention to the factors identified in the impact evaluation; and 2) to disseminate information to correctional teachers, institutional administrators and state administrators about programs or practices that produce or hinder achievement gains in basic skills among institutionalized students.

Questions addressed by this study include the following:

1) How much exposure to basic-skills instruction do students actually receive while they are confined in institutions?

2) To what extent do institutional practices, classroom practices, and student behaviors contribute to the frequency of disruptions to instruction?

3) What is the relationship of amount of basic-skills instruction, instructional characteristics, student characteristics, and student attitudes to achievement gains?

4) How do instructional characteristics relate to the amount of task-engaged activities in basic-skills classrooms?

5) How do some educational programs operate within the constraints of institutional contexts to maximize the amount of scheduled instructional time and to produce achievement gains?

In the following sections, site and student selection procedures, instrument development, and the data-collection methodology employed in the Substudy of Effective Practices are discussed in detail.

## SITE AND RESPONDENT SELECTION

### Site Selection

Selection of the nine sites for the Substudy of Effective Practices was based on the empirical findings for reading and math achievement among the forty

sites participating in the Phase II impact evaluation.* Average site-level achievement gains obtained during the Phase II study had not been found to be different for Title I students or regular-education-only students. Thus, all students for whom pre- and posttests were obtained over a twelve-week period were the basis for the calculation of site-level averages. The determination of whether the site was characterized as gaining, losing, or remaining the same in its reading and math achievement was based on these averages.

The initial sample of 40 sites available for selection for the in-depth study was constrained for several reasons. Constraints included the following:

1) Sites were eliminated where average gains or losses were based on too few cases to measure change with any confidence (i.e., less than 5 students). The types of sites eliminated on this basis were generally (a) those sites having a small student population in basic skills; (b) those sites experiencing a rapid turnover of students (e.g., short-term institutions) where few students were available for posttesting; and (c) those institutions where the administration and/or the student population had been uncooperative during Phase II and where few repeated tests were thus obtained.

2) Sites were eliminated that predominantly housed residents who were non-comparable to the general institutionalized population on important background characteristics, such as students who were too young (i.e., 10-12 years of age) or students who had severe emotional disturbances.

3) Sites were eliminated where the educational program characteristics were atypical of the institutional setting (e.g., institutionalized students who attended public schools), and thus were unlikely to provide useful information for the operation of most correctional education programs.

*Because no claims of representativeness are made in this study, both the thirty randomly selected and the ten purposively selected Phase II sites were eligible for selection.

4) Sites that had lost their Title I funds during the course of the evaluation were eliminated, as were sites where there were plans for an institutional reorganization that might have a dramatic impact on the operations of the educational program.

5) Sites were eliminated from consideration where empirical losses in achievement were quite large, and where the cooperation of institutional staff with Phase II evaluation objectives had been of sufficiently poor quality to seriously question the validity of the obtained data.

The combination of these constraints removed all institutions for adults and all institutions for neglected youth.* Ten sites remained: three were identified as effective with respect to both reading and math gains; three were effective in reading but ineffective in math; and four were not effective in either reading or math. Because of time and budget constraints only nine sites could be selected. One of the sites that was identified as ineffective in both reading and math and that had program characteristics similar to two other ineffective sites (e.g., size) was eliminated. The distribution of achievement gains and losses demonstrated in the Phase II impact evaluation and in the substudy are provided for each of the nine sites in Table II-1.

Although sites known to be undergoing major organizational changes were not eligible for selection, this problem of reorganization persisted nonetheless During the course of the study, two of the nine sites (numbers 2 and 7 in Table II-1) underwent organizational changes so overwhelming that it would be impossible to conclude that the educational program observed was similar to the one found during the Phase II impact evaluation. Site number 2 showed a striking change in outcome from the impact evaluation to the present study. Site number 4, which did not undergo a major reorganization, also showed a change in outcome.

*Only 26 state institutions for neglected youth were operating nationwide during the first year of the evaluation. Approximately one-third of these institutions were not operating by the final year, reportedly because local facilities were assuming the responsibilities of state institutions for the neglected youth.

Table II-1. Proportional Site Gains and Losses in Reading and Mathematics for Phase II and Substudy Findings *(Numbers in Italics are Substudy Results)*

| Site Number | Type I | | Type II | | Type III | | Type IV | |
|---|---|---|---|---|---|---|---|---|
| | Reading Gains | Math Gains | Reading Gains | Math Losses | Reading Losses | Math Gains | Reading Losses | Math Losses |
| 1 | .010<br>(16)*<br>*.124*<br>*(33)* | .03<br>(15)<br>*.068*<br>*(27)* | | | | | | |
| 2 | .29<br>(8) | .06<br>(6) | | | | | *-.179*<br>*(39)* | *-.005*<br>*(23)* |
| 3 | .010<br>(30)<br>*.023*<br>*(46)* | .020<br>(27)<br>*.011*<br>*(44)* | | | | | | |
| 4 | | | .110<br>(14) | -.050<br>(11) | *-.020*<br>*(22)* | *.029*<br>*(20)* | | |
| 5 | | | .020<br>(14) | -.050<br>(14) | | | *-.001*<br>*(25)* | *-.025*<br>*(20)* |
| 6 | | | .030<br>(14) | 0<br>(13) | | | *-.033*<br>*(51)* | *.024*<br>*(47)* |
| 7 | | | | | | | -.070<br>(20)<br>*-.048*<br>*(38)* | -.050<br>(17)<br>*-.009*<br>*(34)* |
| 8 | | | *.067*<br>*(62)* | *-.020*<br>*(50)* | | | -.020<br>(24) | 0<br>(24) |
| 9 | | | *.019*<br>*(31)* | *-.042*<br>*(23)* | | | -.180<br>(10) | -.020<br>(10) |

*Numbers in parentheses are the numbers of students on which proportions are based.

Notification of Sites and Meeting of Site Personnel

Problematic experiences encountered during data-collection activities for the Phase II impact evaluation revealed a need to provide better methodological solutions for the substudy. It was felt that a meeting with institutional administrators would prove beneficial in terms of the assistance they could provide in planning data-collection strategies and in soliciting support for the study from institutional staff and residents. The institutional administrator and educational program administrator at each of the nine selected sites were contacted to request their participation in the Substudy of Effective Practices. These administrators were also asked to attend an orientation meeting. The purposes of this meeting were threefold:

1) To obtain administrative support and cooperation in accomplishing study objectives, such as assurances of student availability for testing.

2) To obtain information specific to each site's program and class schedule.

3) To discuss ways in which data collectors could invoke the institutional reward system to motivate students to participate in testing.

During the course of these meetings, site administrators were updated on the results of evaluation objectives pursued in previous phases of the study. They were apprised of the difficulties encountered during the Phase II impact evaluation and of the proposed solutions to these problems. Institutional staff expressed enthusiasm for the study once the purposes of the study and the rationale for the collection of certain data were clarified. The net result was that institutional administrators gave assurances that they would exercise their authority to the extent possible to prevent competing institutional activities from interfering with the test administrations (though not with the daily operation of the classes to be observed).

## Class and Student Selection

The population of basic-skills classes and students from which selections were to be made was compiled by site personnel. They were instructed to identify all basic-skills instruction, regardless of whether it was designated as a Title I class. The reason for this decision to extend the scope of the substudy beyond Title I boundaries was two-fold: (1) since it was the objective of this substudy to identify effective practices that Title I programs might employ, rather than to investigate the effectiveness of Title I itself, it was expected that effective practices would not be confined to a single funding source. Rather, factors such as the amount and type of basic-skills instruction provided were hypothesized as related to the demonstration of achievement gains; and (2) based on information received during previous phases of the overall evaluation, it was unclear whether "Title I" consistently implied much more than a funding source, since the Title I designation seemed to be variously based on the degree of student need for remediation, the sources of teacher funding, materials and equipment bought with Title I funds, or some combination of these factors.

To attempt a replication of findings of effectiveness at selected sites in the previous year, students were selected for the substudy on a basis similar to the selection of students for the Phase II impact evaluation. (Respondents during the Phase II impact evaluation had represented either all students in small programs at institutions or a random sample of students in larger programs.)

While it was possible in the present study to observe all the basic-skills instruction for all students in smaller institutions (N = 3), it was impossible to do so at the larger sites. Furthermore, limitations imposed by the amount of field time and the number of study personnel available, as well as constraints imposed by the widely varying class schedules of the nine sites, made it impossible to randomly select students, classes or teachers for this study. In the six institutions where classes and students were selected, SDC staff arrived on site in advance of the data-collection team in order to select classes and to arrange the observation and testing schedule.

The identification of factors related to basic-skills gains was the major objective of the study. It was thus necessary to observe all the basic-skills instruction of students to be tested. The combined constraints of limited observational staff, conflicts in class schedules or restricted class time, and the need for repeated observations for validation purposes, limited the basis on which classes and students could be selected.

Wide variations in the ways in which instruction was organized among the sites prescribed that class and student selections would differ somewhat at each of the six sites where selections occurred. Selections were made with the following objectives in mind:

1) To reduce expected problems with attrition in the posttest sample size, classes and students were selected to optimize the likelihood of obtaining repeated measures, with the added constraint that all basic-skills instruction for selected students had to be observed. Thus, basic-skills classes that had high proportions of students whose release dates were known to be forthcoming were not selected.

2) Attempts were made to select classes and students representing a site's full range of basic-skills instruction. At sites where classes were formed on the basis of measured levels of performance, classes were selected from the lower, middle, and upper levels of basic-skills performances.

3) Attempts were made to select classes that assured representation of the basic-skills teaching staff, and the different methods by which instruction was provided.

While the meeting of all these objectives in selecting classes and students was desired, all objectives were not met in every instance. The basis on which students were assigned to classes, for example, at times determined the representativeness of students participating in the substudy. Students in correctional institutions frequently attend classes by residential groupings. While such groupings were at some sites formed on the basis of academic per-

formance, they were more frequently formed on the basis of measures of maturity, aggressiveness, or other behavioral or personality indices. In these cases, basic-skills classes at times contained students of widely varying skill levels.

For the first observational site visit, students selected for participation in the substudy and for observation generally reflected entire instructional groupings. The composition of classes or groupings at several sites, however, proved to be highly unstable at subsequent visits. Schedule changes, institutional reorganization, and the constant entry and exit of residents often resulted in continually changing instructional groups. Furthermore, at least two sites had educational programs based on constantly changing the instructional groups in order to maximize the number of different students with whom residents would learn to successfully interact. The implication of these factors for analysis is that in correctional education programs, "classes" may not be meaningful units of analysis.

## INSTRUMENTATION

Data-collection instruments used in the Substudy of Effective Practices consisted of student outcome measures of basic-skills achievement, student attitudinal measures, staff and administrator conversation guides, and observational protocols utilized by data collectors in assessing the amount of task-related activities occurring in basic-skills classes for reading and mathematics. Contents of instruments used in the study are outlined in Table II-2.

### Student Measures

The student outcome measures were identical to those used in the Phase II impact evaluation. These measures included most of the domain-referenced tests of basic skills in reading and mathematics,* and the Practical Achievement Scale, a test of functional literacy.

*See the Phase II Report for a complete description of the construction of these tests.

Table II-2. Measures for the Substudy of Effective Practices

| Student Outcome Measures | Source/Content |
|---|---|
| Domain-Referenced Test | Measure of student achievement in basic-skills reading and math. |
| Practical Achievement Scale | Measure of functional literacy, student knowledge related to practical settings. |
| Attitudinal Measures | Measure of student self-attitudes and perceptions of school and institution-related activities; and student characteristics (e.g., age, ethnicity, type of offense, frequency and length of prior institutional confinement and prior educational experience). |
| **Measures of Instructional Time** | |
| Student Participation and Attendance Record (SPAR) | Record maintained by teachers on the amount of individual student exposure to basic-skills instruction over a twelve week time span between pre- and posttest. |
| Classroom Observation Protocol | Data collector observation measures of the amount of instructional time individual students devote to task and non-task related activities within basic-skills classrooms. |
| Student Enrollment Data | Record provided by educational administrators on individual student entry and exit date information, hours of academic, vocational and Title I instruction. |
| **Measures of Instructional Processes and Program Characteristics** | |
| General Classroom Observation Protocol | Data-collector assessment of class content, group size, class time allocations for instruction versus other institutional activities, teacher activities within classrooms, student-teacher interaction, and use of materials and resources. |

Table II-2. (Cont'd)

| Measures of Instructional Processes and Program Characteristics (Cont'd) | Source/Content |
|---|---|
| Staff Questionnaires | Background characteristics on various educational staff members (e.g., educational administrators, teachers, aides) provides descriptions of individual background characteristics, time allocations, availability and use of resources. Individual assessments of staff support and program strengths and weaknesses. |
| Site Observation Summary | Observer assessments of staff support and interaction, perceptions of program strengths and weaknesses. |
| Measures of Student Behavior | |
| Assessment Summaries | Teacher and observer assessments of student motivation and individual characteristics related to learning and behavior problems. |

Some sections of the domain-referenced test administered during the impact evaluation were not used in the substudy because of their failure to distinguish among site-level performances. For example, the "word problems" subdomain of the mathematics domain was found to be too difficult for almost all students. On the other hand, the "word recognition" subdomain for the language arts domain was too simple for most students. Hence, neither was used in the Substudy.

Mathematics subdomains included the operations of addition, subtraction, multiplication, and division as performed on "math facts"*, integers, decimals and fractions. Reading comprehension was tested using the eight reading passages utilized in Phase II testing.

Four alternate forms of the domain-referenced tests had been developed for the Phase II impact evaluation. Because one alternate form had empirically been proven more difficult than the others during the Phase II evaluation, it was not utilized in this substudy. Furthermore, because of the possibility of a high rate of student attrition at some sites prior to the posttest, one alternate form was reserved for the possibility that some posttests might be administered by site personnel. The two remaining forms were used at each administration, and one-half of the students received each form. Students were then posttested on the alternate form.**

The impact evaluation had utilized the Practical Achievement Scale, a test of functional literacy. Phase II test administrators had reported favorable student response to this pictorial test focusing on practical experience (e.g., computing the amount of savings on items advertised on sale). Because of these reports of student interest, the Practical Achievement Scale was administered for both the substudy's pre- and posttest, although it had not been used as a change measure during the impact evaluation.

*The performance of math functions on two single-digit integers.

**No significant performance differences between forms were found. These results are presented in Table A-1 in the Appendix.

Measures of student self-attitudes and student perceptions of the school and institutional environment that were utilized during the impact evaluation were also administered in the substudy. Students additionally responded to questions on age, ethnicity, seriousness of offense for which they were confined, frequency and length of prior institutional confinement, and prior educational experiences.

Measures of Instructional Time

In order to address the question of whether students who spend more time in a given subject area learn more than students who do not, measures of instructional exposure time were obtained using several measures of "instructional time": (1) the amount of time allocated or scheduled for basic-skills instruction in reading and mathematics; (2) the amount of time individual students received instructional exposure in reading and mathematics over a twelve-week period; (3) the amount of engaged time, or class time devoted only to basic-skills tasks.

The amount of time scheduled for basic-skills instruction was obtained from the educational program administrator and cross-validated by observations of the field data collection team. This measure of allocated time is problematic, however, in situations where instruction is highly individualized and services are provided to meet the immediate needs of students (e.g., intensive exposure may be provided for short periods of time). In such cases, estimates of allocated time are difficult to calculate.

Measures of the amount of continuous exposure to basic-skills instruction received by individual students over the twelve-week period separating pretests and posttests were obtained from all teachers who provided basic-skills instruction to any of the sampled students. Teachers maintained the Student Participation and Attendance Record (SPAR) for each of two six-week periods separating the pre- and posttests. These SPARs recorded the number of minutes students attended classes in reading, mathematics, or a combination class of basic-skills instruction. SPARs were updated for schedule changes after the

first six-week period, and new SPARs were distributed for the last six weeks of instruction.

Measures of the amount of instructional time devoted to task-related activities were obtained from observers, who used the class observation protocols to obtain these data, for five-minute increments. The observational protocols specified the amount of observed time students devoted to non-task-related versus task-related activities. Non-task-related time was recorded by source of the interruption. Sources of non-task-related behavior were institutional interruptions, usually resulting in students missing classes; class-related interruptions, those non-task-related activities initiated within the classroom; and student-related interruptions such as reporting in sick, daydreaming or conversing with fellow students.

Task-related time was recorded separately for math- and reading-related activities for each type of class (reading, mathematics or combination basic-skills classes). In order to obtain an observational measure of the quality as well as quantity of engaged time, rating scales for the level of student motivation were provided as part of the protocols.

Measures of Instructional Processes and Program Characteristics

A demonstration of effectiveness in producing gains in basic skills may be a function of the kind as well as the amount of instruction. Since the relative importance of the kinds and amounts of instruction is unknown, measures of kinds of instruction were developed. Various kinds of instructions were measured on the basis of class content, group size, teacher behaviors and instructional methodologies, materials and audiovisual resources used, perceptions of school and institutional environment, and class scheduling arrangements. Descriptions of these characteristics were obtained from administrative and teaching staff conversations and from field observations.

Observations on the characteristics of instruction for each student were obtained on each of the three visits. It became clear in the course of the study

that characteristics of instruction provided to students changed frequently at several sites. Repeated measures were thus analyzed separately as measures of changing instructional characteristics.

Educational program administrators, teachers, and observers provided estimates of teacher behaviors and attitudes, such as time allocations for instructional versus other institutional activities, and teacher supportiveness of students. Staff background characteristics and teaching experiences were obtained, as were teacher and administrator opinions about institutional factors impeding or enhancing the delivery of basic-skills services.

Program descriptions such as the amount and types of educational expenditures, staff supportiveness and cooperation, and the perceived importance of education among institutional activities were obtained from educational and institutional administrators.

### Measures of Student Behavior

A demonstration of effectiveness in producing gains in achievement may be a function of individual student characteristics as well as program characteristics. Teacher and observer assessment forms were developed to obtain additional individual measures of student motivation, learning problems, and behavioral problems.

## SELECTION AND TRAINING OF FIELD PERSONNEL

During the three prior data-collection phases of the evaluation, a group of practitioners and evaluators with previous work experience in correctional and educational settings had conducted the data collection. Five of the six data collectors who conducted the observations and testing for the Substudy of Effective Practices had been engaged in the previous phases of this study. These five had acquired almost a full year's exposure to residents and programs in all types of correctional institutions that operate nationwide. The sixth data collector had previous data-collection experience and was experienced in institutional settings.

Since the data-collection requirements of this primarily observational substudy were different from previous data-collection requirements, a one-week training session was held prior to the site visits. Data collectors were briefed on the design and objectives of the study and were familiarized with the data-collection instruments and testing procedures.

Considerable attention was paid to observational techniques of field data collection. The use of observational protocols was practiced in compensatory education classes in a local public school. The classrooms observed for training purposes were selected because of their similarity to correctional education classes (e.g., highly individualized instruction, lab settings, etc). These practice sessions allowed observers to develop techniques for the rapid and easy identification of the five students in each class they were to observe, and to reach agreement among themselves and with the study's staff as to the appropriate use of instruments.

## DATA-COLLECTION PROCEDURES

Data were collected from each of the nine institutions on three site visits conducted at six-week intervals over the January-May, 1979 data-collection period. Teams of data collectors were assigned to institutions to conduct repeated observations of basic-skills instruction and to administer achievement tests for a five-day period for each of the three site visits.

During the first site visit, data collectors scheduled a meeting with educational staff participants in the study. The meeting was scheduled prior to the conduct of any class observations in order to provide participants with an opportunity to become acquainted with the objectives of the study, to request staff cooperation in providing instructional exposure data over the twelve-week instructional period, to discuss the manner in which students should be briefed on the purposes of the study, and to secure student cooperation.

Since it was necessary for observers to learn rapidly the identity of the students they were to observe, teachers were asked to provide some means to identify students as they were assembling for class. Data collectors stressed the

fact that classroom observers were not to become involved in the instructional process, nor were they to interact with students or teachers once the rationale for their presence was explained.

It was expected that observers could identify and record the behavior of five students. Generally, no more than five students were ever observed by any one observer. In some cases, however, classes were large and observers recorded the behavior of more than five students. In these situations it was felt that the added difficulty of observing more than five students was not as problematic as would be the disruption caused by the presence of many observers in the classroom.

Students and classes selected for observation were observed for two days during each of the three visits. Thus, measures of task-related activity were obtained on six occasions. Using observational protocols, data collectors recorded student behavior in five-minute increments for the duration of the class period. The length of observational time varied from 20 minutes to 2-1/2 hours, depending on the scheduled class time at each site.

At least for the first site visits, all students in selected classes were observed. Thus, the aggregated data provided descriptions of basic-skills classes as well as individual student measures. On subsequent site visits, all students in a class were not always observed, since pretests had not been obtained on newly-admitted students.

Student Test Administration

Experience gained during the Phase II impact evaluation revealed the difficulty of obtaining valid pre- and posttests on students confined in correctional institutions. Confined students, although they may be motivated to learn, are often not well motivated to perform on achievement tests, and quickly tire of testing situations.

During the final two days of the first and third visits and immediately following class observations, achievement tests, functional literacy tests, and atti-

tudinal measures utilized in the previous impact evaluation were administered to all students. To minimize problems with student absences from testing sessions, arrangements were made with institutional staff to avoid the assignment of students to other institutional programs or work activities on the day of the testing. Data collectors obtained permission to test students who were locked up, restricted, or confined to residential cottages--at times a rather large percentage of students.

Prior to the testing days, lists of student names and testing schedules were distributed among institutional staff members so their assistance could be solicited in monitoring attendance. This staff assistance was helpful since groups as large as 60 students at times were assembled in a location selected for testing.* In other instances students were residentially grouped according to certain behavioral problems and could be tested only in those special groupings. In these situations many more testing sessions were required than had been originally anticipated.

Tests were administered in a sequence that provided a mid-point break to moderate problems of student restlessness. Students were offered some previously determined motivational rewards as incentives for completing the test. Sessions required two-and-one-half hours on the average.

The need for observers to identify students in order to observe and record their behavior, and the frequency of contact between observers and students over repeated visits, was generally reported to have resulted in the establishment of favorable rapport. Students and observers reportedly would interact between class periods or during meals on days of classroom observations. Thus, data collectors reported their ability to successfully coax reluctant participants to attend test sessions and to complete subtests.

*In some situations, serious space problems made it difficult to find a suitable testing location.

The combination of these factors produced posttest results on 61 percent of the students pretested. Failure to obtain posttests on students was mainly due to their release from the institutions rather than to their refusal. Students who were present in the institution but unavailable for testing accounted for only 3 percent of the cases where posttests were not obtained.

At only one of the nine sites were fewer than 50 percent of the students posttested. At that site the initial sample contained a large number of students for whom it was subsequently decided by the court that their commitment to the institution would terminate at the end of a sixty-day diagnostic period. The number and percentage of students tested by site is reported in Table II-3.

In the following chapter the characteristics of selected sites, students and classrooms are described. Comparisons of the characteristics of the substudy sample and characteristics of the population of representative state institutions were made. These comparisons suggest that sites and students participating in the Substudy of Effective Practices are very similar to representative institutions receiving Title I funds.

Table II-3. Number and Percentage of Students Pretested and Posttested, by Site

| Site | Number Pretested | Number Posttested | Percent of Pretested Students Who were Posttested |
|---|---|---|---|
| 1 | 49 | 38 | 76 |
| 2 | 108 | 42 | 39 |
| 3 | 65 | 46 | 71 |
| 4 | 36 | 25 | 69 |
| 5 | 36 | 25 | 69 |
| 6 | 91 | 64 | [illegible] |
| 7 | 83 | 45 | 54 |
| 8 | 102 | 67 | 66 |
| 9 | 62 | 31 | 50 |
| TOTALS | 632 | 383 | 61 |

## CHAPTER III. DESCRIPTION OF SITE AND STUDENT CHARACTERISTICS

### SUMMARY OF FINDINGS

- The purposive selection of sites for the Substudy of Effective Practices appears to have yielded a sample of sites comparable to a representative sample of institutions for delinquent youths on several dimensions. In terms of the size of the institution, the average length of institutional confinement, and the average values on the demographic characteristics of the resident population, substudy sites were comparable.
- The purposive selection of sites also appears to have yielded a sample of students similar to the representative sample obtained in the Phase II impact evaluation of 30 institutions. Basic-skills performance levels for both reading and mathematics were similar for the two samples.
- Again, similar to Phase II impact findings, no overall achievement gains were detected for basic-skills students over the twelve-week period of instruction for the nine sites as a whole. Some sites were found, however, that produced gains in reading and/or mathematics.
- Two of the three previously identified sites that were effective in reading and mathematics again proved to be effective in both areas. Four sites were found to be ineffective in producing gains, and three sites demonstrated mixed results for reading and mathematics.
- The average amount of achievement gain for students who maintained or improved their scores over a twelve-week instructional period in mathematics and reading was similar in magnitude to Phase II findings of gain.
- Instructional characteristics of the sample of classrooms revealed that classes averaged 55 minutes in length, but ranged widely from 20 minutes to 2-1/2 hours. Classroom instructional time was highly individualized in the sense that most students worked independently on tasks that were prescribed for their level of achievement. Three-fourths of students' engaged time was spent in drill or practicing skills, and 20 percent was spent in actual receipt of instruction from teachers. Considerable variation was found on the amount of student-teacher interactions.

In this chapter, a comparative description of the characteristics and basic-skills performance of the student sample for the Substudy of Effective Practices and the representative sample from the Phase II impact evaluation is provided. Classrooms are described in terms of their observed instructional characteristics and interpersonal interactions. A case-study description for each site may be found in Appendix B.

One issue in the interpretation of study findings contained in this report is the question of whether the substudy sample is comparable to the population of students and the population of educational programs in correctional institutions nationwide. Since sites participating in the Substudy of Effective Practices were purposively selected, there is no a priori basis for assuming that site characteristics, individual student characteristics and the performances of students participating in the present study are comparable to the characteristics and performances of the randomly sampled students and sites that participated in the impact evaluation. In the following section, therefore, evidence is provided that demonstrates the similarity of sites and students participating in the substudy to a nationally representative sample.

## DESCRIPTION OF THE SAMPLE

Site selection procedures employed in the substudy prevented certain types of state institutions from being represented in this study. Institutions for adults that house some residents under twenty-one years of age and institutions for neglected children, for instance, are not represented in this study. Furthermore, shorter-term institutions (i.e. less than a three-month length of stay, on the average) and those institutions concentrating on Title I objectives other than basic-skills performances are not represented in this study. The institutions that were selected for study come from the population of state institutions for delinquent youths. Such institutions comprise about 60 percent of all institutions receiving Title I Neglected or Delinquent funds, receive two-thirds of Title I Neglected or Delinquent funds, and house approximately two-thirds of the recipients of such funds nationwide.

To provide some assessment of the extent to which the nine sites participating in the substudy represent all state institutions for delinquent youths, comparisons were made on institutional descriptors obtained during the Phase II impact evaluation. In terms of size, randomly selected institutions for delinquents that participated in the Phase II impact evaluation averaged 180 residents. This compares to an average population of approximately 190 residents for sites participating in the Substudy of Effective Practices.

Student Characteristics

The characteristics of students participating in the Substudy of Effective Practices were compared to average values of the characteristics of students from randomly selected sites participating in the Phase II evaluation. Substudy participants averaged almost 16 years of age, with an age range of 10 to 19 years. This compares to the findings in the impact evaluation of an average age of 16.6 years for all Title I students, 18.2 years for all regular-education-only students, and 17.3 years for students in institutions for delinquent youths. For both substudy and Phase II samples, students had last attended the ninth grade prior to their institutional confinement.

The racial/ethnic breakdown found approximately 50 percent of students in Phase II sites to be of non-minority status. This compares well to the average of 49 percent non-minority students in the substudy sample. Percentage comparisons of the most serious reason for institutionalization (i.e. status offense, drug offense, property offense and person-related offense), again, reflect few differences between the students in the nine sites in this sample and the Phase II population. Property offenses were given most often as the reasons for institutionalization.

Students participating in the Substudy of Effective Practices were compared to the combined Phase II sample of randomly selected Title I and regular-education-only students in terms of basic-skills performances. This combined comparison group was considered the appropriate comparison since the focus of the substudy was basic-skills students rather than students designated as Title I

recipients. Although not all regular-education-only students were receiving basic-skills instruction during the Phase II impact evaluation, findings had revealed that approximately 30 percent of these students were as deficient in basic skills as were Title I students.

The comparisons of levels of mathematics and reading performances for these samples indicate a surprising degree of similarity (see Table A-2 in the Appendix). The mathematics performance level of students participating in the substudy was identical to the performance level of students participating in the Phase II study. This similarity of performance was found on each mathematics subdomain of addition, subtraction, multiplication, and division. Substudy students in general also performed similarly on operations on the subdomains of math facts (operations on single digit numbers), integers, decimals, and fractions. Only on the division of decimals did the substudy sample differ from the Phase II representative population (performing more poorly).

The performance of students on reading comprehension was similar to the performance of Phase II students. On the average, substudy students provided correct responses for 65 percent of reading passages, while Phase II students responded correctly to 62 percent.

Students scored somewhat comparably to the Phase II sample on the Practical Achievement Scale, a measure of functional literacy. On the average, substudy students responded correctly to 19 of the 30 items testing math- and reading-related skills with practical problems (e.g., the computation of costs and savings). This compares to correct responses on an average of 17 items for Title I and 21 items for regular-education-only students in Phase II.

For most attitudinal measures, site-level averages of self-reported student attitudes for substudy sites were similar to population averages for the representative Phase II sites (see Table A-3 in the Appendix).

Characteristics of the sites and students participating in the Substudy of Effective Practices were also compared to the characteristics obtained on these identical nine sites for the previous year. With respect to size of population and length of stay, data obtained in the substudy were almost identical to data obtained for these sites during the Phase II evaluation. Similarly, average age of the student population and proportions of minority and non-minority students were almost identical for both years.

The average performance level of Title I students in both reading and mathematics in Phase II at the nine sites was compared to their average performance level obtained in the substudy. For most sites, averages obtained in the substudy were consistent with averages obtained in the previous year for both reading and mathematics. At several sites, however, discrepant averages in reading for the samples were found. For two of these sites, the Phase II averages were based on the entire student population. Since a sample of students had been selected for the substudy, it appears that poorer performers had been selected. At the third site, only the "neediest of the needy" students had been identified as Title I students for the Phase II results. Since substudy selections focused on basic-skills classes rather than Title I students, the site-level reading performance obtained in the substudy was somewhat higher than the Phase II finding and appears to be the average of the Title I and regular education student performance obtained during Phase II.

Average scores on attitudinal measures obtained on substudy students for both years were somewhat similar to previous findings at these sites, and are reported in Table A-3 in the Appendix.

In general, then, sites selected for their effectiveness or ineffectiveness in producing gains in achievement appeared to have similar samples of students represented in the Substudy of Effective Practices. Except for the effects that the selection of poorer reading performers at two sites and better reading performers at one site might have had on gains, there is no a priori reason to

expect that site* and student characteristics of substudy participants are different for the two years. The demonstration of a reasonable amount of accuracy in differentiating effective from ineffective sites is thus expected.

Furthermore, the similarity of site characteristics of the substudy sample and the population of institutions for delinquent youths indicates that substudy findings might be applicable to those institutions in general. The comparability of performance levels of substudy students and the representative sample of students in Title I Neglected or Delinquent Institutions indicates that the identification of instructional characteristics effective for the substudy sample might also be appropriate for basic-skills students generally.

Student Achievement Gains

Gains in achievement were computed for students as the difference between posttest and pretest scores. To prevent the calculation of achievement gains based on performance measures where one or both of the tests did not reflect a valid student attempt, a clinical assessment was made of each student's pre- and posttest forms. Particularly among math subdomains, it was readily apparent where students had completed one subdomain (e.g., addition) but did not even attempt subsequent subdomains (e.g., subtraction). In such situations, subdomains were scored in a manner that disallowed their inclusion in the computation of composite mathematics scores. This assessment procedure, of course, could not screen out tests that were only half-heartedly attempted. To assess the frequency of such occurrences, gain scores for reading were individually reviewed for the demonstration of dramatic gains or losses. This review indicated only nine extreme gain or loss scores among the 356 students for whom pretests and posttests were obtained.

In a further attempt to assess the extent to which tests were taken seriously, students were asked after their performances on the tests to rate the extent

*It should be recalled that a reorganization of education and institutional programs at two sites occurred after sites had been selected.

to which they had performed to the best of their ability. Overall, 65 percent of students reported that they performed to their best capabilities on all tests; 26 percent reported they did the best they could on some of the pretests and some of the posttests; 7 percent reported that they somewhat attempted all subtests, and only 3 percent reported that they really didn't try at all on any tests.

Students who reported poor attempts on the tests were removed from an analysis of performance level and achievement gains. It was found that these measures were not affected by the removal of students who admitted to poor attempts. All students were thus retained in subsequent analyses.

Similar again to impact evaluation findings, no overall gains in achievement were found over the twelve-week period of instruction for reading and mathematics on the domain-referenced tests of basic skills. However, the Practical Achievement Scale demonstrated gains for eight of the nine sites on the order of .01 in magnitude overall (s.d. = .18). Since this scale had not been administered as a measure of achievement gain in the Phase II impact evaluation, these results revealing overall gains rather than stability or losses, cannot be compared to previous findings.* The initial performance level and achievement gains for each achievement outcome measure at each of the nine sites are presented in Table A-4 in the Appendix.

The nine sites had been selected for their past demonstration of effectiveness or ineffectiveness in producing gains in reading and mathematics. To compare site-level results obtained in the substudy with previous findings of effective-

*The Practical Achievement Scale (PAS) is a test of functional literacy combining reading and math skills through the use of picture problems, cartoons, etc. This instrument differs from the domain-referenced tests (DRTs) in the sense that it has characteristics described by some researchers as inherently more appealing to students (Arlin and Hills, 1974). At least two possibilities exist to explain the different results of the PAS and DRTs. The overall failure to demonstrate achievement gains with DRTs may be due to a lack of motivation among institutionalized students in testing situations; perhaps only the use of "high interest" items, such as cartoons, captures the attention of students. Alternatively, gains may reflect a "practice effect" since only one form of the PAS exists.

ness, Table II-1 is again referenced. In addition to the Phase II pattern of findings, where sites were found to be effective in both reading and mathematics, in neither reading nor mathematics, or in reading but not in mathematics, sites were also found that demonstrated effectiveness in mathematics but not in reading.

Two of the three sites that had previously been identified as effective in both reading and mathematics again proved to be effective in both subject areas. The third ostensibly successful site was now found to be ineffective in both reading and math. The relatively few cases upon which previous findings of effectiveness were based for this site, combined with constant reorganization and changes in administrative personnel at the site, in all probability explain these mixed results.

Only one of the three sites previously identified as ineffective in producing gains in both reading and mathematics had similar results in the substudy. Two sites that had previously demonstrated gains in reading but not in mathematics were found in the substudy to demonstrate losses in both areas. Thus, in terms of overall effectiveness, two sites were found to be effective in producing gains in both reading and mathematics, four sites were found to be ineffective in both respects, and three sites demonstrated mixed results.

The magnitudes of substudy gains in achievement were compared to Phase II findings for students who maintained or improved their performances over 12 weeks of instructional time. The rationale of this analysis is that students who maintain or improve performances may provide a more accurate expectation for the amount of change in performance that occurs over a twelve-week instructional period. The performance of students who demonstrate achievement losses may more likely reflect the non-motivational aspects of testing rather than actual loss of skills. The results of this analysis are provided in Table III-1.

On the average, students who maintained or improved their scores in mathematics gained at a rate identical to the Phase II students (.07). Substudy students gained .13 on the literal comprehension tests, as compared to the .11 gains of

Phase II students. These results replicate Phase II findings of the amount of gain to be expected for reading and mathematics performance over a twelve-week period of instruction (assuming similar amounts of instructional exposure).

Table III-1. Performance of Students Who Maintained or Improved Scores Over 12 Weeks of Instruction

| Subject Matter | N | | Pretest | | Posttest | | Change Over 12-Weeks' Instruction | |
|---|---|---|---|---|---|---|---|---|
| | 1* | 2** | 1 | 2 | 1 | 2 | 1 | 2 |
| Math | 135 | 148 | .60 | .67 | .67 | .73 | .07 | .07 |
| Reading | 164 | 184 | .56 | .60 | .67 | .73 | .11 | .13 |

*1 = Phase II performance

**2 = Substudy performance

Instructional Characteristics

The composition of instructional groupings within classrooms proved to be highly unstable both over days of instruction and over observational visits. That is, different students were likely to be found in classrooms. The overall characteristics of instruction itself, however, varied little over observations.

Observed classes averaged 55 minutes in length, although there were large variances around this mean. The length of class periods ranged from 20 minutes to 150 mintues. Instruction in more than 85 percent of the classrooms was individualized in the sense that students worked independently on different tasks. Teacher-student ratios did not appear to vary greatly over observational visits. On the average, basic-skills classes provided one teacher or teacher aide for every three students. Combination basic-skills classes initially were more poorly staffed, on the average. These classes reported an average of one teacher or aide for every four students. The effects of the reorganization of educational programs in two sites that frequently assigned

students to combination basic-skills classes reduced this ratio in subsequent visits to equal the ratio in other types of classes. Despite rising institutional populations and past findings of overcrowded conditions, instructional areas were observed to be overcrowded in only about 10 percent of the classes.

The major dimension on which instruction appeared to vary was the extent of student-teacher interaction: about 60 percent of the classes were observed to be characterized by much student-teacher interaction, and 40 percent were characterized by limited student-teacher interaction. The nature of these student-teacher interactions was described by several statements on which observers recorded the frequency of the type of interaction for each class observed. Interactions were characterized as ones where praise, simple statements of fact, or criticisms characterized teacher feedback. As can be seen by data provided for the three observational visits in Table III-2, criticism or negative feedback was infrequently given (although the frequency of observations of negative criticisms increased over subsequent visits). In general, teachers were observed to provide positive feedback, or feedback that was neutral in tone.

In only one-third of the basic-skills classes were textbooks used by most of the students. The use of programmed instruction and the use of audiovisual equipment was not extensive, despite the presence of programmed instruction (i.e., materials were available but not used by students). In only about one-third of the classes was audiovisual equipment (e.g., cassettes, visual readers) available (see Table III-3).

Student interactions in the classrooms took on only two values: students either never interacted (about one-fourth of classrooms) or their interactions were friendly and positive. In less than 5 percent of the classes at each observational visit was conflict among students observed.

The partitioning of students' class time according to whether they were receiving instruction from teachers, practicing skills, or receiving feedback, was stable across observations. On the average, students spent nearly three-

Table III-2. Descriptions of Teacher-Student Interactions for Three Observational Visits*

| | Frequency of Description for Student-Teacher Interactions | Percent of Classroom Observations (Numbers of Classroom Observations) | | |
|---|---|---|---|---|
| | | Observational Visit 1 | Observational Visit 2 | Observational Visit 3 |
| Teacher(s) praises, commends, or provides other positive feedback | Most | 45 | 42 | 46 |
| | Some | 29 | 38 | 40 |
| | Few or None | 25 | 20 | 14 |
| | | (281) | (277) | (228) |
| Teacher(s) explains, instructs, or corrects as simple statement of fact in neutral tone | Most | 21 | 27 | 33 |
| | Some | 43 | 45 | 39 |
| | Few or None | 36 | 28 | 29 |
| | | (281) | (277) | (228) |
| Teacher(s) criticizes, insults, embarrasses, or provides other negative feedback | Most | 0 | 0 | 1 |
| | Some | 8 | 16 | 17 |
| | Few or None | 92 | 83 | 82 |
| | | (281) | (277) | (228) |

*About 20 percent of the classrooms are not represented in this table because student-teacher interaction was too limited to assess.

Table III-3. Student Usage of Instructional Materials. Percentage of Classrooms in Which Usage Was Observed (n = 350 classroom observations).*

| | Textbooks | Programmed Learning Materials, Workbooks | Audiovisual Equipment (programmed instruction with cassettes, viewers, TV, etc.) | Locally Developed Materials Designed for the Specific Needs of Students; High Interest Materials |
|---|---|---|---|---|
| Percentage of classes in which materials were unavailable to students** | 5 | 33 | 64 | 33 |
| Percentages of utilization among classes having materials available*** | | | | |
| Used by all or most students | 33 | 18 | 8 | 26 |
| Used by some students (less than one-half the class) | 23 | 11 | 5 | 20 |
| Used by few or none of the students | 45 | 71 | 87 | 55 |

*Percentages obtained on first visit. Data from the second and third observational visits were very similar to those obtained at the first visit.

**Materials may have been present in the educational program but were not present in the classrooms observed.

***Entries do not add to 100 due to rounding errors.

fourths of their task-engaged class time practicing skills, not quite 20 percent of their time receiving instruction, and less than 10 percent of their time receiving feedback from instructors. Stallings (1980) reports that in remedial reading classrooms at the secondary level 23 percent of engaged time is spent in instruction, 61 percent is spent in practicing skills and 16 percent is devoted to feedback. Educational programs in institutions seem to emphasize practice to a greater extent.

On observed dimensions such as teacher support for students, teachers averaged a rating of about 7 on a 10-point scale, but were rated consistently lower on their involvement in and commitment to instruction. Ratings of student peer supportiveness were significantly lower than were ratings of teacher supportiveness of students. Ratings of student commitment to learning were higher than were ratings of their support of peers.

In the following chapter, the instructional time of students is described in terms of task-related and non-task-related activity that occurs in basic-skills classes. The relative frequency of sources of disruptions are discussed in order to describe factors that were identified in the Phase II findings as obstacles to the delivery of basic-skills services.

## CHAPTER IV. BASIC-SKILLS INSTRUCTIONAL TIME IN INSTITUTIONAL SETTINGS

### SUMMARY OF FINDINGS

- Students in institutional settings were found to attend an average of three hours of basic-skills instruction in reading and slightly less than 3 hours of mathematics per week. However, large variations on average amounts of attended basic-skills time were found across institutions and within many institutions. Site-level averages ranged from 1.5 to 5.5 hours per week for reading, and 1 to 4 hours per week for mathematics. Discrepancies between scheduled time and attended time indicate that institutions experience difficulties in consistently delivering instructional services to students.

- The amount of scheduled time that was actually attended was reduced by student absences due primarily to the simultaneous scheduling of other institutional activities. Other reasons for absence were placement in lock-up (20 percent of absences), and factors beyond the control of administrative planning and operations (e.g., students reported sick), which accounted for less than 20 percent of absences. Average absence rates varied between 10 and 80 percent across sites.

- Of class time scheduled for basic-skills instruction, more than 50 percent was observed to be consumed by non-task-related activities. The proportion of task-related activities varied dramatically among sites, ranging from an average of approximately 30 percent to an average of almost 90 percent. Of class time attended for basic skills instruction, an average of 37 percent of class time was observed to be non-task related.

- Students themselves were responsible for only 25 percent of scheduled time spent on non-task-related activities for reasons such as a lack of motivation and reported illnesses. These findings question the notion that failure to demonstrate program effectiveness is largely a function of the poor motivation of institutionalized students.

- The remaining 20 percent of non-task-related time was found to be related to practices or occurrences within the classroom itself. Smoking breaks, clean-up activities, student accounting, discipline, and the engagement of students and teachers in non-task-related conversations combined to account for this non-task time.

## EXPOSURE TO BASIC-SKILLS INSTRUCTION IN INSTITUTIONAL SETTINGS

Among educators in general, many factors have been theorized as important in the determination of program effectiveness. Among the possible focal points for a study such as the present one were teacher personal characteristics, student background characteristics, instructional characteristics, etc. Some attempt was made to measure, at least minimally, many of these variables. For purposes of this study, however, more precise measurements of the amount of instructional exposure to reading and math were major objectives.

The rationale for this focus was based on the results of the impact evaluation findings (as well as other research) that questioned the extent to which institutionalized students were actually receiving basic-skills instruction. Past research has suggested that the amount of time needed, allowed, and spent are major factors in school learning (Bloom, 1974, 1976; Wiley and Harnischfeger, 1974). Empirical findings of a relationship between instructional time and reading gains have been reported for non-institutionalized classroom settings (Hanson and Ross, 1975; Barr, 1974, 1975).

These past findings, however, utilized measures of <u>allocated</u> time. Arlin and Roth (1978) have utilized time-on-task as a measure of instructional time, arguing that increasing time-on-task during a specified class duration should have the same effect as increasing the length of the class. Advocates of "time-on-task" as the appropriate measure of instructional time (Arlin and Roth, 1978; Marliave, Fisher and Dishaw, 1977) suggest that it is a more important determinant of reading gains than allocated time.

The analyses of instructional time contained in Chapters IV and V were designed to answer the following questions:

A) *How much exposure to basic-skills instruction do students actually receive while they are confined in institutional settings?*

B) *To what extent do institutional practices, classroom practices, and student behaviors contribute to the frequency of non-task-related activity?*

*C) What is the relationship of the amount of basic-skills instruction to achievement gains?*

For purposes of the present study, instructional time was measured as (1) allocated time, (2) class-attended time, and (3) amount of class time that is task engaged. Measures of allocated time were obtained from administrative staff as well as from observations by the field data collection teams. A measure of class-attended time was obtained from all teachers providing basic-skills instruction to each student over the twelve-week period separating pre- and post-tests. Estimates of the proportion of task-related class activity were obtained from two-day observations at three different points in time.

The first two questions relate to the delivery of basic-skills instruction. Factors impeding that delivery are now addressed. The relationship of the amount of basic-skills exposure and achievement gains will be addressed in Chapter V.

*A. How much exposure to basic-skills instruction do students actually receive while they are confined in institutional settings?*

Scheduled Class Time

Measures of scheduled or allocated time as indicators of individual student instructional exposure are at times difficult to obtain and/or are poor indicators of actual exposure. One reason for this difficulty is that academic instruction is only one among many goals at correctional institutions. Thus, time of day and amount of instruction is likely to vary across institutions, across days of the week, and across students or groups of students.

Data obtained from administrators' reports of scheduled class time, as well as observational data on scheduled time, are reported in Table IV-1. The observational measures in particular point to the complexity and variability of scheduled time as an estimate of individual student exposure in institutional settings. The administrative reports of scheduled daily class time for students (which are at times the results of attempts to average highly individual-

Table IV-1. Measures of Time Allocated to Academic Instruction

| | Institutional Report | | Observational Measures | | | |
|---|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e) | (f) |
| Site | Hours per day classes are scheduled | Hours per day students are scheduled to attend classes | Hours per day classes are scheduled | Hours per week classes are scheduled | Hours per day students are scheduled to attend classes | Hours per week students are scheduled to attend classes |
| 1 | 6 | 5 | 6 | 30 | 2.5-4.5* | 12.5-22.5* |
| 2 | 4 | 4 | 4 | 18.5 | 4 | 18.5 |
| 3 | 7 | 6 | 5 | 22 | 4.5 | 20 |
| 4 | 8 | 4 | 7 | 30.6 | 3.5 | 16 |
| 5 | 4 | 4 | 3 | 9 | 3 | 9 |
| 6 | 7 | 5 | 5 | 25 | 2.5 | 12.5 |
| 7 | 7 | 3 | 1-3* | 4-12* | 1-3* | 4-12* |
| 8 | 6 | 5 | 6 | 30 | 3.5 | 8 |
| 9 | 6 | 6 | 3.5 | 14 | 3.5 | 14 |
| Mean | 6 | 4.7 | 4.6 | 20.6 | 3 | 13.7 |

*Scheduled time was reported to vary widely by cottage grouping. The midpoint of this range was used to compute the sample mean.

istic scheduling practices) do not compare well to observers' reports of average scheduled instruction (see columns (b) and (e) in Table IV-1). Furthermore, a comparison of columns (e) and (f) in Table IV-1 indicates that weekly instructional scheduling is not a simple multiple of daily scheduled time. For a more detailed description of institutional scheduling practices, see the case-study descriptions contained in Appendix B.

Attended Class Time

In order to obtain useful data on exposure to instruction, teachers were asked to maintain daily attendance records. From these records of minutes of daily student exposure to reading and mathematics for each class attended over a twelve-week period, aggregate measures of total student exposure to basic-skills instruction were constructed. These aggregated data reveal that on the average students received 39 hours of basic-skills reading instruction and 34 hours of basic-skills mathematics instruction over the twelve-week period of the study. Thus, the average student receives a combined 6 hours of basic-skills instruction in reading and mathematics per week.* Slightly more instruction is received in reading than in mathematics. As can be seen in Table IV-2, the variation in the amount of basic-skills instruction received among institutions was large, ranging from a combined average total of less than 3 hours per week to almost 9 hours per week. The average amount of instructional time that is attended per week is less than two days of scheduled time (Table IV-1, column (e)) at each of the sites, except Site 6. This discrepancy indicates a persisting difficulty in delivering educational services to institutionalized students.

Exposure to reading instruction and mathematics instruction demonstrated wide variations among the nine sites and within most sites. A minimum average of 1.5 hours of reading instruction per week and a maximum average of 5.5 hours

*These average amounts of basic-skills instructional exposure may be compared to data obtained on fifth-grade students in public school classrooms, who performed at a comparable basic-skills level. These students were found to receive about 5 hours per week of reading exposure and 2.8 hours per week of math exposure (Marliave, Fisher and Dishaw, 1977).

Table IV-2. Average Amount of Exposure to Reading and Math for a 12-Week Instructional Period, by Site (Time actually present in class)

| | READING | | | MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Total $\bar{X}$ Hours | s.d. | Average Hours per Week | Total $\bar{X}$ Hours | s.d. | Average Hours per Week |
| Total Sample | 39.2 | 20.3 | 3.3 | 34.2 | 14.8 | 2.8 |
| Site | | | | | | |
| 1 | 66.1 | 35.7 | 5.5 | 40.4 | 18.4 | 3.4 |
| 2 | 33.8 | 14.0 | 2.8 | 27.2 | 12.7 | 3.1 |
| 3 | 34.4 | 7.0 | 2.9 | 32.3 | 4.9 | 2.7 |
| 4 | 28.0 | 8.5 | 2.3 | 27.8 | 8.7 | 2.3 |
| 5 | 53.8 | 7.7 | 4.5 | 30.1 | 8.8 | 2.5 |
| 6 | 47.9 | 12.1 | 4.0 | 50.2 | 14.3 | 4.2 |
| 7 | 18.1 | 7.1 | 1.5 | 14.0 | 8.9 | 1.2 |
| 8 | 37.4 | 13.3 | 3.1 | 36.1 | 10.8 | 3.0 |
| 9 | 31.1 | 10.6 | 2.6 | 33.1 | 7.2 | 2.8 |

of reading instruction per week were found among the nine sites. Mathematics instruction ranged from slightly more than 1 hour per week to slightly more than 4 hours per week. Although the estimate of total exposure at the institution that reported the least amount of instructional exposure was very low, observers at this site indicated that even this scanty exposure was overestimated because they felt that the classes they observed were put on for their benefit and that even less instruction took place when the observers were absent between visits.

## TASK-RELATED ACTIVITY IN BASIC-SKILLS CLASSROOMS

*B. To what extent do institutional practices, classroom practices, or student behaviors account for non-task-related activity?*

The large within-institution variation in the amount of exposure for several of the sites suggests that factors other than a reduced amount of allocated or scheduled basic-skills class time affects the amount of instructional exposure. Thus, student absences from classes were examined to identify the frequency of student absences as well as the reasons for these absences.

### Student Absences

Observers maintained records of student absences for the observational days and recorded reasons for absences (reasons were generally obtained from teachers). Since continual knowledge of each resident's whereabouts is a primary task in most institutions, these data were not difficult to obtain. Estimates of student absence rates are not based on duplicated counts: for instance, a student placed in lock-up who missed several classes over the period of observation is counted only once. Thus, absence rates do not provide accurate estimates of the amount of scheduled instruction that has been missed by students (an estimate of the total amount of instruction for which students are absent is contained in a subsequent discussion). However, reasons provided for these absences are some indication of the relative extent to which institutional factors, disciplinary procedures, and student behaviors (e.g., AWOL, sick reports) account for student absences from classes.

Absence rates obtained for each site are reported in Table IV-3. Site-level absence rates indicate a wide range in the frequency of absences among sites, from virtually no absences to as high as an 80 percent absence rate. On the average, 40 percent of absences were due to student participation in non-instructional, program-related activities. Institutional work assignments also contributed to student absentee rates. The combination of these types of scheduling conflicts accounted for more than one-half of student absences for the combined three observational periods.

Participation in certain programs and the receipt of certain services in correctional institutions is often considered a privilege rather than an obligation. The effect of this sometimes privileged status for educational programs is that punishment for misconduct during any part of the day may result in the denial of school attendance. Sometimes all the residents of a given cottage are restricted to quarters (and cannot participate in education). The application of such disciplinary measures accounted for 20 percent of absences observed on the three visits. However, absences due to punishment may be more important in accounting for lost instructional time than that figure indicates. Students placed in lock-up are generally absent from classes for several days at a time, unlike other absences that may remove a student for a few class periods. Additionally, the rate of student lock-up at sites where such disciplinary measures are more frequently employed was much higher at the first visit than it was at the two subsequent visits. This latter finding suggests that institutional staff, in their unsolicited attempts to guarantee student availability for classroom observations, may have utilized this method of discipline less frequently on subsequent site visits.

Student absences due to factors beyond the immediate control of the institutional staff (e.g., sick reports, court appearances, AWOL) accounted for 22 percent of total absences. The rate of class absence for these reasons may be expected to be a normal part of institutional routine.

Table IV-3. Student Absence Rate by Site and Reasons for Absence

| | Percent Student Absences for 1st & 3rd Observational Visits | | Reasons for Absences (Percent of Total Student Absences for Combined Weeks) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | First | Third | Discipline or Lock-up | Institutional Work | Other Program Activities | Furlough or Court Appearances | Reported Sick | AWOL |
| Average Percent: | 30% | 46% | 21% | 16% | 40% | 6% | 15% | 2% |
| Site Number: | | | | | | | | |
| 1 | 47 | 79 | 11 | 29 | 36 | 5 | 10 | 8 |
| 2 | 39 | 60 | 40 | 11 | 40 | 2 | 6 | 1 |
| 3 | 9 | 9 | 23 | 14 | 36 | 9 | 18 | 0 |
| 4 | 8 | 44 | 3 | 11 | 32 | 18 | 37 | 0 |
| 5 | 39 | 76 | 18 | 35 | 24 | 0 | 24 | 0 |
| 6 | 33 | 28 | 23 | 16 | 46 | 3 | 12 | 1 |
| 7 | 16 | 24 | 33 | 9 | 23 | 9 | 19 | 2 |
| 8 | 62 | 51 | 21 | 18 | 46 | 10 | 1 | 4 |
| 9 | 16 | 45 | 18 | 2 | 73 | 0 | 7 | 0 |

Task-Related Activities In Basic-Skills Classrooms

The task-related and non-task-related activity of sampled students in basic-skills classes was observed and recorded on two days for each of the three observational visits. These observations were compared in order to investigate their stability over repeated observations. Observations were then aggregated to provide an estimate of the relative proportions of task-related and non-task-related activity for both scheduled and attended class time in correctional education settings.*

Consistent with the data obtained on student absences that indicated numerous disruptions to the delivery of basic-skills instruction, observational data indicate that almost one-half of scheduled instructional time and about two-thirds of attended instructional time was engaged in basic-skills tasks (see Table IV-4). The source, or reason for, non-task activity was also recorded and classified into one of the following categories: institution-initiated, classroom-initiated, or student-initiated. The intent of this analysis is to identify the relative influence of factors or practices that detract from instructional exposure and that could be changed vis-a-vis the factors that are less subject to change (e.g., student illnesses).

The first analysis includes the influence of students absent from class, and thus is a measure of scheduled or allocated time. Although the estimates varied somewhat over days and visits, it can be estimated that over one-half of non-task-related scheduled time in correctional education settings is due to institutional activities or scheduling practices that prevent students from

*The use of scheduled class time or attended class time in these analyses varies depending on the issue addressed. For purposes of identifying the relative influences of factors impeding the delivery of basic-skills instruction, scheduled time is most appropriate since it takes into account student absence due to practices such as institutional scheduling conflicts, as well as student-reported illnesses. To describe the task-engaged behavior of students, however, attended class time is perhaps a better indicator of behavior that is a function of classroom practices and student characteristics.

Table IV-4. Task-Related Activity by Source of Interruption for Observational Visits and Days

| | Observational Visit 1 | | Observational Visit 2 | | | | Observational Visit 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Day 2* | | Day 1 | | Day 2 | | Day 1 | | Day 2 | |
| | $\bar{X}$ | s.d. | $\bar{X}$ | s.d. | $\bar{X}$ | s.d. | $\bar{X}$ | s.d. | $\bar{X}$ | s.d. |
| Proportion of Task-Related Basic Skills Activity: | | | | | | | | | | |
| For all scheduled class time | .47 | .29 | .48 | .37 | .45 | .38 | .41 | .36 | .43 | .39 |
| For all attended class time | .54 | .24 | .65 | .28 | .66 | .26 | .63 | .26 | .67 | .27 |
| Proportion of Scheduled Time Spent in Non-Task-Related Activities Attributed to: | | | | | | | | | | |
| Institution-initiated interruptions | .57 | .62 | .55 | .67 | .52 | .49 | .63 | .52 | .52 | .55 |
| Classroom-initiated interruptions | .18 | .21 | .22 | .32 | .22 | .35 | .15 | .20 | .25 | .55** |
| Student-initiated interruptions | .25 | .31 | .23 | .29 | .26 | .32 | .22 | .26 | .23 | .44** |

*Because of the disruption to classes as a result of the observational teams' presence on the first day of observations, task-related activity for that day are not reported.

**The large variation around these means for student-initiated and class-initiated disruptions on the last day of the third visit was due to a large number of illnesses at one site.

attending classes, or remove them for some portion of their scheduled class time. Student absences from classes were primarily for reasons of participation in other institutional activities.

Disruptions to task activities originating within classrooms themselves accounted for an average of 20 percent of non-task-related scheduled time. Estimates of these types of disruptions were fairly stable across observational visits. These interruptions included accounting for the student's presence (e.g., responding to queries communicated through the public address system, searches for AWOL students, escorting students to and from classes, etc.), class clean-up activities within the classroom, and teacher or teacher aide engagement of students in non-task-related conversations.

Given the frequent references to the poor motivation of institutionalized students, a surprisingly small 25 percent of scheduled time that was not task engaged was attributed to student disengagement (e.g., daydreaming, working on activities other than basic skills, or carrying on a conversation with other students or teachers). This finding suggests that either students are not as poorly motivated to learn as has been suggested, or that some institutions have learned to motivate poorly-motivated students. Support for this latter interpretation was provided by the finding that almost 40 percent of students had reported their school performance prior to their confinement as being "poor" or "very poor," and 25 percent of students had actually quit school prior to their institutional confinement. However, in reporting on their academic performance within the institutional education program, only 8 percent of students reported "poor" or "very poor" performances.* Given the negative student assessments of public school performance and the positive assessments of correctional school performance, basic-skills programs in at least some sites appear to be effective in changing student perceptions of performance, and perhaps their motivation to learn.

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*It should also be pointed out that students had been confined an average of seven months at the time these data were obtained. Thus, these attitudinal measures are not purely measures of attitudes toward school brought to the institution, and may well include the influence of correctional education programs.

Non-task-related time was then analyzed removing the influences of student absences, which may provide a better estimate of the task-related behavior of students actually attending basic-skills classes.* On the average and across observations, 37 percent of the time students spend in basic-skills classrooms is non-task related. Estimates of non-task-related activity for students actually present in class varied dramatically across sites, ranging from approximately 10 percent to almost 70 percent. This large variation indicates that some sites are highly effective and others are largely ineffective in reducing disruptions within classrooms and in motivating students to engage in basic-skills activities.

These data compare favorably to the reports from the Beginning Teacher Evaluation Study (Marliave, Fisher and Dishaw, 1977), where about 25 percent of the time was found to be non-task related (for fifth grade). Their estimates are systematically lower than those reported here because they did not accumulate transition time (moving from one activity to another, or waiting for an activity to begin) in the total time of attendance. In their study transition time accounted for 9 percent of the school day.

Task-Related Activities Among Types of Classes

One question posed by the within-site variation on task-related activity is whether different types of basic-skills classes tend to engage students in more activity by virtue of the subject matter (i.e. are students more or less task engaged in reading or math classes?). Because of the usage of combination basic-skills classes, it was impossible to describe the extent of task activity by subject matter alone (i.e., non-task time used in making transitions to another subject matter cannot be appropriately attributed to any one of the tasks). Thus, the three types of basic-skills classes observed--reading only, math only, and combination basic-skills classes--were analyzed for their relative amounts of task-related activity. However, the effects of these class types on student task engagement is difficult to assess for the institutional education programs represented by the present sample. Combined basic-skills classes, for instance,

*For descriptive data on the proportion of task-related activity for both allocated and attended class time over repeated observations, see Table A-5 in the Appendix.

were not an instructional feature of all nine sites. Three sites had no combination classes. Furthermore, assignment of students within institutions to combined classes or specific content classes was mixed: in some sites students were assigned to specific basic-skills content classes, and additionally to a combination basic-skills class. Time allocated for combination classes in these situations was intended to be used in whatever skill area students needed additional work. In other sites combination basic-skills classes were characteristic of all basic-skills instruction. Thus, findings reported for types of classes are only suggestive.

Students in reading and in math classes were found to be task engaged for 65 percent of the time, on the average. Students in combination basic-skills classes were on task only slightly more than one-half of the time (see Table IV-5).

On the average, reading classes were found to be scheduled for slightly longer periods of time than were math classes. Combination classes were approximately 40 minutes longer than were reading classes. Since combination classes lasted much longer than did reading or math classes, it is impossible to separate the influence of class length from the effects of the unspecified nature of class tasks, or other characteristics differentiating combination classes as a type. For instance, few would argue with the provision of breaks for long class periods. However, observers noted among combination basic-skills classes a tendency for students to disengage themselves from tasks in anticipation of these breaks, and to take long periods of time to again become task-oriented after the completion of the break.

Observers also noted the greater propensity of these largely unstructured classes to result in less task-related and more disruptive activity for both teachers and students. It reportedly took students and teachers a longer period of time to identify a task in which students were to be engaged at the beginning of the class. This observation is consistent with previous findings that transitions disrupt time flow and that disruptive pupil behaviors increased during unstructured transitions (Arlin, 1979). Thus, while longer

Table IV-5. Task-Related Activity by Type of Class and Source of Interruption for Observational Visits

| | Reading Classes | | Math Classes | | Combination Classes | |
|---|---|---|---|---|---|---|
| | Visit 2 | Visit 3 | Visit 2 | Visit 3 | Visit 2 | Visit 3 |
| Proportion of Task-Related Activity for Students Attending Classes | .66 | .64 | .64 | .66 | .54 | .50 |
| Proportion of Scheduled Time Spent in Non-Task-Related Activities Attributed to: | | | | | | |
| Institution-initiated interruptions | .57 | .58 | .50 | .57 | .47 | .56 |
| Classroom-initiated interruptions | .18 | .18 | .20 | .22 | .29 | .18 |
| Student-initiated interruptions | .25 | .24 | .30 | .21 | .24 | .25 |

periods of class time could potentially increase instructional time by the reduced need to perform such activities as escorting students to and from classes, the frequent breaks provided within these classes are also a large source of disruption from which both students and teachers may take longer to recover.

The relative influences of sources of disruption were investigated for their relationships to types of classes. As might be expected, institutional disruptions to the delivery of basic-skills instruction were not sensitive to the type of basic-skills classes. Moreover, student-initiated disruptions did not differ by type of basic-skills class.

However, an examination of the sources of disruption by observational visits (see Table IV-5) reveals that data from the second visit, particularly among combination classes but also somewhat among math classes, disproportionately influence these averages. At the second observational visit classroom disruptions were observed with greater frequency. One possible explanation for this occurrence is that two institutions for whom combination basic-skills classes were frequently used to deliver instruction underwent a complete reorganization of their educational program after the first visit. With the state of flux caused by the reorganization, both teachers and students spent much of their time in non-task-related activities, such as in trying to obtain instructional materials and supplies. When this source of variation is considered, interruptions due to students, classroom activities, or institutional activities are no more likely to occur in reading classes than they are in mathematics and/or combination basic-skills classes.

Stability of Measures of Task-Related Activities

As is demonstrated in the preceding tables, class estimates of task-related activities by type of class were surprisingly stable over repeated observations. A composite measure of task-related activity for individual students was investigated for its stability over repeated observations. The results of these analyses for each type of class are provided in Table IV-6. The findings reveal that estimates of task-engaged behavior obtained at the first visit for

individual students are not related to subsequent estimates of task-engaged activity. Only in combination basic-skills classes was a significant correlation between observations on the first and second visit obtained.

Table IV-6. Pearson Correlations of Measures of Task-Related Activity Over Repeated Observations by Type of Class (N)

| | Reading Classes | Math Classes | Combination Basic-Skills Classes |
|---|---|---|---|
| First and Second Observations | .03<br>n.s.<br>(225) | .03<br>n.s.<br>(192) | .19<br>p = .05<br>(105) |
| First and Third Observations | .10<br>n.s.<br>(155) | .07<br>n.s.<br>(116) | -.03<br>n.s.<br>(65) |
| Second and Third Observations | .43<br>p < 001<br>(198) | .56<br>p < .001<br>(181) | .37<br>p < .001<br>(84) |

However, significant correlations were found between measures of task-related activity obtained on the second and third observational visits.

As can be seen in Table IV-6, the magnitude of these stability coefficients varied among types of classes. The coefficient for math classes demonstrated the greatest stability (.56) as compared to the coefficient obtained for combination basic-skills classes (.37). One reason for this difference among class types may have been provided by observers themselves. Observers reported that it was easier to discern math-related task behavior than reading-related task behavior. Task behavior in mathematics generally required students to perform operations and calculate solutions to problems. Such task-related behaviors are more readily observed. Reading-related behavior, on the other hand, was reported to be more difficult to discern. It was sometimes not clear to observers if students were actually reading or if they were daydreaming with eyes fixed on books. In other situations, observers reported that it was diffi-

cult to distinguish between student exposure to reading tasks with the use of high interest materials (e.g., magazines and newspapers) and the idle examination of pictures in these materials.*

The reasons for the lack of correlation between task measures obtained during the first observational visit and subsequent visits are more difficult to identify. Among the possible interpretations are the fact that usage of observational protocols was new, and that the first observations were used to standardize observational procedures among observers and among sites. Another possible interpretation is that student behavior differed on the first observation. It is possible that the unknown identity of the observers combined with the unknown purposes of their presence may have altered some students' behaviors. Furthermore, organizational changes that occurred in some institutions after the first observational visit could have confounded initial estimates of task-engaged behavior.

*This observation is consistent with previous research findings which suggest that the use of similar high-interest materials may increase time on task, but may decrease time on reading (Arlin and Roth, 1978).

## CHAPTER V. EFFECTIVE PRACTICES AND CHARACTERISTICS OF BASIC-SKILLS PROGRAMS IN CORRECTIONAL SETTINGS

SUMMARY OF FINDINGS

- Significant but modest correlations were obtained between instructional exposure (class attendance) and basic-skills achievement. The greater the amount of instructional exposure, the larger were the achievement gains for both reading and math. The magnitude of this correlation was augmented by the adjustment of instructional time to account for the estimated proportion of attended class time that is actually task engaged.
- In general instructional characteristics that were related to gains in reading classes were similar in magnitude and direction to relationships obtained in mathematics and combination basic-skills classes. This finding implies that instructional characteristics that may be more effective than others might be implemented for all basic-skills instruction. The greater the percentage of the students' class time that was engaged in the receipt of instruction from teachers or aides, the greater was their reading achievement. A second finding was that the fewer students assigned per teacher, the higher were the achievement gains. Also, the lesser the amount of time students spent conversing with teachers about non-task-related topics, the greater were their gains.
- The limited usage of programmed instructional materials was related to both reading and math gains. The more frequently high interest/low skill-level materials were utilized for instruction, the larger were the achievement gains in both reading and math. These findings regarding the usage of instructional resources should be interpreted cautiously, however, since the usage of self-programmed resources was also related to a lack of teacher-student interactions among these nine sites.
- Descriptions of the receipt of positive, neutral or negative feedback characterizing teacher-student interactions as they related to achievement gains demonstrated mixed results. Among both reading and combination basic-skills classes, the greater the frequency that teachers provided positive feedback in the form of praise, the less were the achievement gains. Frequent inter-

actions characterized by simple statements of fact, or even criticism, were positively related to reading gains. The more frequently praise and positive feedback were provided in math classes, however, the larger were the math gains. In terms of student interactions, the higher the observed frequency of conflictual interactions, the lower were the achievement gains in math classes.

- In terms of individual student characteristics, only minority status and observations of learning problems were related to achievement. Minority members were slightly more likely to demonstrate gains in reading achievement than were non-minority members. Students assessed by observers to have learning difficulties (e.g., English as a second language, visual or speech impairments, learning disabilities) were less likely to demonstrate gains in reading.

- Although more positive student attitudes were not related to gains in achievement, changes in attitudes were significantly related. The greater the change towards more favorable reports of self-esteem, school involvement, perceptions of teacher supportiveness, and perceptions of the practical orientation of correctional education programs, the larger were the achievement gains.

- Instructional characteristics were investigated for their relationship to engaged time. The greater the proportion of students' time that was engaged in the receipt of instruction and feedback, the less the amount of time devoted to practice or drill, and the higher the student ratings of teacher supportiveness, the higher was the proportion of student task-related activity.

The results of analyses presented in this chapter focus on the empirical relationship among achievement gains and instructional time, instructional characteristics, student characteristics, and student attitudes. The proportion of task-engaged activity observed in basic-skills classrooms is also investigated for its relationship to instructional characteristics.

Given the fact that students demonstrated varying levels of basic-skills deficiencies, it is possible that an aggregate measure of changes in mathematics performance, for instance, was insensitive to gains in math subdomains. Change measures were computed for addition, subtraction, multiplication and division and were related to the instructional characteristics of the program and to individual student characteristics. In only a few cases were any variables found related to subdomains that were not also similarly related in direction and magnitude to gains in the composite math change score.

Since a discussion of the results of analyses by change scores on subdomains would add no new information to the relationships of achievement gains and instructional time, instructional characteristics, and student characteristics, the results of such analyses are not presented separately. Furthermore, relationships to change scores obtained on the Practical Achievement Scale were similar in direction and magnitude to relationships obtained on the domain-referenced tests of basic skills and are not included in this report.

## INSTRUCTIONAL TIME AND ACHIEVEMENT

### Attended Class Time

It was hypothesized that the greater the amount of instructional time provided students in a subject area, the larger would be the gains in achievement. To test this hypothesis, Pearson correlation coefficients for the relationship of attended class time over a twelve-week period of instruction and achievement gains in reading and mathematics were computed.

The results of these analyses revealed significant and positive, but weak, relationships between attended time and achievement gains. Reading gains de-

monstrated a correlation of .14 (p = .02) with the total amount of reading exposure, and total math exposure demonstrated a correlation of .15 (p = .02) with math gains. Since a relationship was also obtained between math gains and total amount of reading exposure, a composite measure of total basic-skills time was investigated for its relationship to math and reading gains. This analysis revealed a stronger correlation of .20 (p = .01) between the amount of exposure to basic-skills instruction and gains in mathematics. However, the total amount of basic-skills instruction received was no more strongly related to gains in reading than was the measure of reading exposure.

### Task-Related Time

Powell and Dishaw (1980) and Stallings (1980) contrast the relationship between allocated time and achievement gains and that between engaged time and achievement gains. They found allocated time to be negligibly or variably related to achievement gains while engaged time is consistently, and positively related to such gains. In the present study, the measure of attended time is a considerable improvement over the measure of allocated time because it accounts for absenteeism, which is a major source of non-task time in these institutions. However, a further improvement is realized by accounting for all non-task time. When task-engaged time is related to achievement gains, the relationship for math classes increases to .23 and that for reading classes increases to .17. Among combination classes the correlation between task-related time and achievement gain was about .26 for both reading and mathematics. Thus, it can be concluded that the amount of task-related instructional time is moderately related to achievement gains. Subsequent analyses were undertaken to determine which task-related instructional activities seemed most beneficial.

## INSTRUCTIONAL CHARACTERISTICS AND ACHIEVEMENT GAINS

The instructional characteristics of classes were recorded by observers. Because the student composition of classes underwent continual change, and in a few situations the organization of classrooms and the goals of teaching themselves changed, instructional characteristics of the classes each student attended were recorded at each observational visit.

As was discussed in the description of the instructional characteristics of classrooms, the aggregate characteristics of classes demonstrated considerable stability over the three observational visits. Separate inspection of the relationship of measures of instructional characteristics to achievement gains for each observational visit, however, revealed significant differences. Measures for the first observational visit were not usually related to gains. Apparently, instructional characteristics suffered similar problems of measurement on the first observation as did task-engaged measures. It is possible that this is due to the observers' becoming more familiar with the observational techniques employed in the study. It could also be due to a reactive effect of having observers in the classrooms. As observers became more familiar with the required observational procedure and as institutions reacted less to their presence, the measurement of subsequent instructional characteristics may have been improved.

Another possible interpretation is that subsequent measures demonstrated relationships to gains because they reflected actual changes in the nature of instruction that students received. Indeed, the reorganization of the educational programs at two sites after the first observational visit produced large differences in the conduct of instruction at these sites. For instance, at one site basic-skills instruction that was conducted in large classrooms at the first observational visit was provided in residential group settings for small numbers of students after reorganization. Furthermore, the teachers at this site with whom students interacted were instructed to respond to the "whole" person, and to engage in supportive counseling and recreational activities as well as instructional activities.

In the subsequent tables, correlations are reported only if the correlations from both the second and third observations are statistically significant and consistent in sign and magnitude. The values presented are the highest of the two correlations.

Instructional characteristics were investigated separately for each type of class--reading, mathematics, and combination basic-skills classes. In general, instructional characteristics that were related to gains in one type of class were also related to gains in other class types. Only with respect to the use of instructional media did class types produce different results. These differences may be explained by the fact that some types of instructional media (e.g., audiovisual equipments) are utilized with differing frequency in mathematics classes than in reading classes among our sample of respondents. While most of the significant relationships obtained were modest ones, they were generally consistent in direction and similar in magnitude across observational visits and class types for which significant relationships were obtained. These findings suggest that instructional characteristics that are related to achievement gains are similar for all basic-skills classes.

Table V-1 presents the results to be discussed in this section. It is separated into three parts: instructional characteristics, classroom interactions, and instructional resources. Each part is discussed in turn.

Characteristics of Teachers' Instruction

The percentage of student class time engaged in various aspects of instruction was analyzed in terms of achievement gains. The ways in which students' time was spent among instructional categories was not found to be related to achievement gains in math classes or combination basic-skills classes. Among reading classes, however, it was found that the larger the amount of time students were receiving instruction from the teacher, the larger were the gains in reading achievement. The less time students spent in "other" activities, the greater were the achievement gains.

Teacher engagement of students in non-task-related conversations was the primary source of "other" activity. Such conversations were characteristic of situations in which teachers were considered to be both teachers and counselors, and conversations were generally supportive in nature. It might be expected that the simultaneous pursuit of dual objectives might negatively impact the accomplishment of one specific goal.

Table V-1. Pearson Correlations of Instructional Characteristics and Achievement Gains*

| | Math Classes | Reading Classes | Combination Basic-Skills Classes | |
|---|---|---|---|---|
| | | | Math Gains | Reading Gains |
| Instructional Characteristics: | | | | |
| Teacher/student ratio | | -.16<br>p = .01<br>(227) | -.21<br>p = .04<br>(89) | |
| Percent student time engaged in instruction with teacher | | .15<br>p = .02<br>(224) | | |
| Percent student time engaged in non-instructional tasks with teacher | | -.25<br>p < .001<br>(210) | | |
| Classroom Interactions: (frequency of such interactions) | | | | |
| Teacher praises, commends, or provides other positive feedback | .21<br>p = .004<br>(177) | -.25<br>p < .001<br>(210) | | -.19<br>p = .05<br>(136) |
| Teacher explains, instructs or corrects as simple statement of fact in neutral tone | | .23<br>p < .001<br>(223) | | .20<br>p = .04<br>(114) |
| Teacher criticizes, insults, embarrasses, or provides other negative feedback | | -.19<br>p = .05<br>(170) | -.26<br>p = .01<br>(88) | |
| Observations of teacher supportiveness | .22<br>p < .01<br>(177) | -.22<br>p = .001<br>(210) | | -.21<br>p = .03<br>(113) |
| Conflictual student interactions | -.18<br>p = .02<br>(166) | | | |

*Only correlations reaching the $\alpha = .05$ level of significance are reported here.

Table V-1. Pearson Correlations of Instructional Characteristics and Achievement Gains. (Cont'd)

| | Math Classes | Reading Classes | Combination Basic-Skills Classes | |
|---|---|---|---|---|
| | | | Math Gains | Reading Gains |
| Instructional Resources: (frequency of usage) | | | | |
| Programmed learning materials | -.23<br>p = .003<br>(164) | -.18<br>p = .007<br>(227) | -.31<br>p = .003<br>(112) | -.29<br>p = .001<br>(113) |
| High interest or locally-developed materials | .18<br>p = .01<br>(164) | .13<br>p = .05<br>(220) | .21<br>p = .02<br>(107) | |

It was also found that the fewer students assigned to each teacher, the larger were the achievement gains in reading. While small classes might reduce the amount of time spent in management and transitional activities, they do not guarantee that the time that is saved will be used for instruction. Non-task-related conversations with instructors may also increase.

Descriptions of different ways in which teachers interact with students were investigated for their relationship to achievement gains. Interactions were characterized as ones where teachers praise, commend or provide other positive feedback; ones where teachers explain or instruct as simple statements of fact in neutral tones; and ones where teachers criticize, insult, embarrass or provide other negative feedback. Observers rated these descriptions according to whether they described most, some, few or none of the classroom interactions.

The results of these analyses showed consistency within class types across the second and third observational visits, but were inconsistent across class types. For both reading and combination basic-skills classes, the greater the frequency that teachers provided positive feedback in the form of praise, the less were the achievement gains. Interactions characterized by simple statements of facts, even corrections, were positively related to achievement gains.

The direction of relationships for interactions in math classes and achievement gains demonstrated different results. For math classes, the more frequently praise and positive feedback were provided, the greater were the gains. Neither the frequency of interactions that were more neutral in tone nor the frequency of negative or critical feedback were related to gains in math classes.

The relationship between observer assessments of teacher supportiveness and achievement gains had similarly mixed results for mathematics classes versus reading and combination basic-skills classes. The more supportive teachers in mathematics classes were perceived to be, the greater the achievement gains. In reading and combination basic-skills classes, less supportive behaviors were related to gains in both reading and mathematics.

While there is no obvious explanation for these conflicting findings, several possible explanations exist. Particularly among math classes, the nature of math task-related activities allows for the provision of positive feedback at many appropriate points. Feedback in reading classes, especially where little instruction is ongoing and students engage mostly in practice, may be more difficult to provide. Students could possibly view positive feedback in these situations as patronizing, since it may not be perceived to be related to the demonstration of any particular reading skill.

This finding is consistent with other research conducted at the primary level, where it was found that some teachers tended to overuse praise, particularly insincere, perfunctory praise that was in response to "praise-seeking" behavior from their students (Anderson et al., 1979; Brophy and Evertson, 1976).

Related to this explanation, and perhaps interacting with it, is the possibility that observers may have found it more difficult to distinguish among positive, neutral, or negative forms of feedback in reading classes. Observers and students may simply have differed in their perceptions of the nature and frequency of types of feedback received.

Observer assessments of student interactions were also made in terms of the positive, neutral, or conflictual nature of student interactions. Only in math classes were conflictual interactions observed, and found to be negatively related to gains in achievement.

Instructional Resources

The frequency of usage for different types of instructional media was investigated for relationships to achievement gains. Types of media included textbooks, programmed workbooks, audiovisual equipment, and locally-developed and/or high interest materials. Only programmed learning materials and high interest and/or locally developed materials showed significant relationships to gains. The use of programmed learning materials was consistently negatively related to gains, while the use of high-interest and/or locally developed

materials was positively related to gains--except for reading in combination basic-skills classes (where the relationship was not statistically significant).

One plausible explanation for the negative effect of programmed materials is that teachers might tend to engage themselves in less instructional activity where these materials are available. Data on teacher-student interactions in the few classes using these materials were not numerous enough to confirm this hypothesis, however.

STUDENT CHARACTERISTICS AND ACHIEVEMENT GAINS

The individual student characteristics of age, sex, ethnicity, previous grade attended, seriousness of offense for which respondent was institutionalized, anticipated length of institutional confinement, actual length of confinement, and history of institutional confinement were analyzed for their relationship to achievement gains in mathematics and reading. The results are presented in Table V-2. Minority status, a history of previous institutional confinement, and observations of student learning problems were found to be related to reading achievement gains. Minority members were slightly more likely to demonstrate gains in reading than were non-minority members ($r = .10$, $p = .05$).*

Students were asked where the year prior to their present confinement was spent and the length of time spent in each living situation. Responses indicated that time was spent in one, or some combination, of the following situations: parental homes, foster homes, group homes, or institutional confinement. Only the amount of time spent in an institutional setting was significantly related to gains in reading achievement ($r = .42$, $p = .001$). Thus, the more time students had spent in an institutional setting in the year prior to their present confinement, the greater were their reading gains. It should be pointed out that this correlation applies only to the 76 students who were institutionalized in the prior year.

*Ethnicity was coded "1" for minority members and "0" for non-minority members.

Table V-2. Pearson Correlations of Student Characteristics and Attitudes and Achievement Gains*

| Student Background Characteristics | Reading Achievement | Math Achievement |
|---|---|---|
| Ethnicity | .10<br>p = .05<br>(343) | |
| Number of times institutionalized | -.11<br>p = .05<br>(331) | |
| Length of time institutionalized in previous year | .42<br>p < .001<br>(76) | |
| Observer assessment of learning problems (0 = no problems) | -.14<br>p = .05<br>(243) | |
| **Student Attitudes**** | | |
| Changes in self-esteem | | .14<br>p = .02<br>(264) |
| Changes in degree of school involvement | .16<br>p < .01<br>(320) | |
| Changes in perceptions of teacher supportiveness | .11<br>p = .05<br>(314) | .14<br>p = .02<br>(261) |
| Changes in perceptions of the practical orientation of classes | .18<br>p < .001<br>(336) | .13<br>p = .03<br>(267) |
| Perceptions of institutional school performance | .11<br>p = .04<br>(347) | |

*Only correlations significant at $\alpha \leq .05$ are reported.
**All attitudinal measures were scored so that the larger the scale score, the more positive the attitude.

To avoid overinterpretation of the beneficial impacts of institutional confinement that this finding might imply, it should be pointed out that this relationship probably speaks more to the advantages of uninterrupted or continuous delivery of basic-skills services than it does to the advantages of confinement. Evidence for this interpretation is the fact that the number of times a student had been institutionalized during his/her lifetime was negatively related to gains in reading achievement.

Observers assessed individual students in terms of the existence of learning problems (e.g., visual or speech impairments, English as a second language, learning disabilities). These assessments indicated that students with learning difficulties were less likely to demonstrate gains in reading achievements than were those students with no observed problems ($r = -.14$).

## STUDENT ATTITUDES AND ACHIEVEMENT GAINS

Students' self-reported attitudes were examined for relationships to achievement gains. Attitudinal scales included measures of self-esteem; locus-of-control; attitudes toward school and learning, reading and mathematics; perceptions of the practical orientation of the educational program, and perceptions of teacher supportiveness.

These analyses revealed that, in general, more favorable student attitudes at the first time of observation were not related to gains in achievement, with one exception. Students' ratings of perceived performance in the institutional school setting did demonstrate a significant ($r = .11$) relationship to reading achievement (see Table V-2). Students who perceived themselves as poor performers were less likely to demonstrate gains in reading achievement than were students who perceived their institutional school performances as favorable.

Although student attitudes bore little relationship to gains, changes in attitudes (over the twelve-week period) were significantly related to gains in achievement. Positive relationships were obtained for reading and math gains and changes in reports of self-esteem, degree of school involvement, percep-

tions of teacher supportiveness and perceptions of the practical orientation of correctional education programs (see Table V-2). The magnitude of the reported relationship between perceptions of practical orientation and math gains was increased among lower-level math performers.

## INSTRUCTIONAL CHARACTERISTICS AND STUDENT TASK-ENGAGED ACTIVITY

The amount of task-related activity within a classroom had been found related to achievement gains, as reported in the preceding pages. Furthermore, certain instructional processes demonstrated a relationship to achievement gains. In the interest of identifying factors that are related to greater task-related activity, instructional characteristics were investigated for their relationship to the proportions of task-related activity. The results of these analyses are presented in Table V-3.

The way that student time was structured within classrooms demonstrated a moderately strong correlation to the amount of time spent engaged in task-related activities. This is consistent with qualitative analyses presented by Bossert (1979). The direction and magnitude of these relationships was similar among reading classes, mathematics classes and combination basic-skills classes. The magnitude of most obtained correlations was lower for combination basic-skills classes, however.

The greater the amount of the students' time that was engaged in the receipt of instruction and feedback, the greater was the proportion of student task-related activity. Conversely, the less the amount of time devoted to practice or drill, the greater the proportion of task-related activity. Quite simply, this means that when teachers work, students work. Left to their own devices for purposes of practice or drill without the provision of feedback by teachers, students are likely to engage in non-task-related activities. This finding is important in light of the fact that, on the whole, 75 percent of the students' time was found to be structured for practice or drill (see Chapter III). An experiment reported by Stallings (1980) suggests that, with sufficient specification of the variables involved, it is possible to induce teachers to allocate class time such that activities that lead to more engaged time can be increased.

Table V-3. Pearson Correlations of Instructional Characteristics and Task-Engaged Activity by Type of Class*

| | Reading Classes | Math Classes | Combination Basic-Skills Classes |
|---|---|---|---|
| Structure of Students' Time: | | | |
| % Instruction time | .52<br>$p < .001$<br>(330) | .57<br>$p < .001$<br>(329) | .32<br>$p < .001$<br>(183) |
| % Practice or drill | -.54<br>$p < .001$<br>(330) | -.62<br>$p < .001$<br>(329) | .25<br>$p < .001$<br>(147) |
| % Receipt of feedback | .26<br>$p < .001$<br>(330) | .60<br>$p < .001$<br>(329) | .33<br>$p < .001$<br>(109) |
| % Other | -.13<br>$p = .03$<br>(267) | -.19<br>$p < .001$<br>(327) | -.30<br>$p < .001$<br>(128) |
| Descriptions of Teacher-Student Interactions: | | | |
| Teacher(s) praises, commends, or provides other positive feedback | -.20<br>$p < .001$<br>(329) | .21<br>$p < .001$<br>(328) | |
| Teacher(s) explains, instructs, or corrects as simple statement of fact in neutral tone | .22<br>$p < .001$<br>(329) | .43<br>$p < .001$<br>(328) | .20<br>$p < .01$<br>(204) |
| Teacher(s) criticizes, insults, embarrasses, or provides other negative feedback | .21<br>$p < .001$<br>(329) | -.22<br>$p < .001$<br>(328) | -.14<br>$p = .05$<br>(204) |
| Teacher supportiveness | .41<br>$p < .001$<br>(330) | .35<br>$p < .001$<br>(327) | |
| Teacher commitment to institution | .52<br>$p < .001$<br>(330) | .49<br>$p < .001$<br>(327) | .46<br>$p < .001$<br>(183) |

*Only correlations significant at $\alpha \leq .05$ are reported.

In math classes and combination basic-skills classes, the use of praise, positive feedback or feedback entailing simple statements of fact was positively related to task-engaged activity. Criticism was negatively related to task-engaged activity. However, as was found previously for the achievement outcomes among reading classes, the less praise or positive feedback was observed to be provided, and the more neutral or even negative the feedback, the greater the student engagement in task-related activities. Again the interpretations offered here are that either praise in reading classes is perceived in a qualitatively different way from that given in math classes, or that the learning of math concepts may provide more opportunities for providing meaningful feedback.

Teacher supportiveness and teacher commitment to instruction were also related positively to the amount of task-engaged time in all classes (except teacher supportiveness in combination basic-skills classes). These results also suggest that the notion of praise (as distinct from support) has a different meaning for students in reading classes.

## CHAPTER 4. SUMMARY AND DISCUSSION OF FINDINGS

The Substudy of Effective Practices set out to explore the types of instructional characteristics and practices that are related to achievement gains in reading and mathematics. Certain instructional characteristics as well as the amount of instructional exposure received proved to be related to student gains. In general, sites that had been identified as effective were distinguished from ineffective sites in the sense that they were able to deliver more of the positive aspects of basic-skills instruction to more of their students. Thus, effective sites were not necessarily characterized by their ability to schedule more time for instructional exposure. They were characterized in terms of being successful in reducing the frequency of student absences from classes, and in obtaining larger proportions of task-engaged time from their students.

Despite these successes at a few sites, the overall amount of non-task-related activity was found to be large. The importance of this finding for the successful delivery of Title I and other basic-skills programs is clear. The delivery of instruction to remediate the highly deficient basic skills of institutionalized students, already limited by an expected six-month length of institutional exposure, is further obstructed by the high proportion of non-task-related activity. When the total amount of exposure (attended) time (which at some sites was as low as one hour per week of mathematics and one and one-half hours per week of reading instruction) is adjusted by the average proportion of task-related time, the actual amount of instruction delivered over a twelve-week period is 48 hours per student. Thus, the actual amount of basic-skills instruction that is expected to be provided to a student during an average length of institutional confinement is a little more than 50 hours in reading and a little more than 40 hours in mathematics.

Some suggestions of ways in which task time could be increased and absences minimized were obtained from the study. For instance, the system used to administer institutional privileges was observed in some situations to negatively affect class attendance. In these situations, institutional work was an acti-

vity for which residents were paid, and hence participation in this activity was seen as a privilege. No matter how small the salary, most residents clearly preferred the short-term objective of obtaining money to buy coveted items (such as cigarettes) over the longer-term objectives of acquiring reading and mathematics skills.

Other institutions operate, as do public schools, on a normal work-day s d-ule. Although residents were on site at all hours of the day, all institu tional activities were scheduled within the limits of a six-to-eight-hour day. Thus, activities were scheduled simultaneously to meet the many needs of institutionalized students (e.g., counseling, recreation). The net effect was that educational programs often competed for participants with counseling and work programs. Furthermore, institutional disciplinary procedures often restricted students from class attendance.

At times these alternative activities appeared to be appropriate focuses of concern, and at times they appeared to needlessly detract from basic-skills instruction. For instance, work programs that took students from classes rarely involved more than unskilled janitorial or cafeteria positions and, thus, were not expected to improve the job skills of students except as they pertained to janitorial work. It was unclear to observers why these kinds of alternatives were preferable to time spent in educational programs.

The above situations differ from past observations of education programs in some institutions for adults (Bartell et al., 1977), where educational goals were admittedly of low priority. However, the implication for the operation of the education program was that classes were frequently held at times that did not compete with other institutional activities (e.g., early mornings or evenings). The result of such scheduling practices is that fewer institutional residents receive basic-skills instruction, but the instruction that is delivered may be less subject to institutional interruption.

The therapeutic or disciplinary model that provided the philosophical basis for institutional activities also influenced the amount of time allocated for

instruction and interruptions to the delivery of instruction. At least one-half of the institutions utilized some variation of the positive peer culture approach to therapy and discipline. The philosophy of such approaches--that an individual's behavior is a responsibility of the group--results in practices whereby the entire group is subsequently rewarded or punished for the actions of an individual or a few members. The implication of this approach for the operation of educational programs is that entire cottages are often restricted from class attendance, resulting in a high frequency of class absences.

Aside from the allocation of instructional time, other institution-level factors were found that may influence program effectiveness. Although empirical evidence was not specifically obtained to support this discussion, observations over three years of data-collection activity pointed out perhaps critical factors operating in the more ineffective sites and in some of the sites demonstrating mixed results. Staff morale (and related factors such as teacher disengagement from instruction) had been a reported and observed problem among several institutions for several years. Whether poorly motivated staff were initially hired, or whether staff developed poor motivation as a result of certain institutional factors, is unknown. Based on three years of unsystematic observations and the retrospective reporting of staff and administrators, no single, consistent, factor could be isolated that was common to all the institutions reporting staff morale problems.

Common features among these sites, however, were the frequent changes on a number of dimensions, including population size, the type of residents confined, the way in which the institution was organized, administrative leadership, treatment philosophy or some combination of these factors. Changes in the number of students confined, which are often unpredictable and quite large, may be more detrimental than a consistent, large, student population. An institutional or educational program designed on the basis of intensive and individualized instruction, and staffed for a certain size of instructional grouping, will be overwhelmed by dramatic increases in the population.* Repeated occur-

*Most institutions of at least moderate size for delinquents had reported such seasonal variations in the size of their populations during the Phase II impact evaluation.

rences of this sort are likely to take their toll on staff morale and motivation. Teachers have reported that in institutions where rapidly changing sizes of population have occurred over several years, they do little more than "warehouse" students.

Other factors that were noted in ineffective sites where staff morale was problematic were perceptions of weak or disinterested administrators, constantly changing administration, and state-level changes in either the organization of the institution and/or the treatment philosophy pursued, the type of offender confined, etc. Implementation of the concept of "decentralization" of treatment within correctional institutions, for example, may lead to situations where teachers who are only trained as science teachers may be responsible for instruction in many content areas, as well as for providing counseling services. The issue raised for the operation of educational programs is not whether the centralized or decentralized concept is preferable. Rather, the implementation of such models under existing staffing and resource availability may present problems on many dimensions and for several years for education programs.

While state-level and institutional administrators may be interested in the previous findings (e.g., that Title I programs may be effectively designed, but their services are only unsystematically provided to educational recipients) these findings are of little avail to correctional teachers who may find themselves powerless to influence the institutional factors that impede class attendance and service delivery. Nonetheless, substudy findings did identify classroom practices that were related to a greater proportion of task-engaged class time and to gains in achievement, two criteria of instructional effectiveness.

Students in classes in which both reading and math skills were taught (combination classes) showed much less task-related activity than did students in classes where only one of the two subjects was taught. The combination classes seemed to have less formal structure for the use of time and teachers seemed to be less involved with instruction.

While classes providing large blocks of unstructured instruction seemed to result in less task-related behavior, classes of very short duration (e.g., 20-35 minutes) also resulted in relatively large proportions of non-task-related activities. The constant changing of classes and the need to account for student presence, combined with clean-up activities near the conclusion of each class, dramatically reduced student exposure to instruction.

One unexpected observation was that several of the sites that strictly adhered to institutional rules and routine during non-class time were characterized by a large degree of unstructured non-task time within classrooms. Observers frequently noted that at these sites, educational programs were merely one more form of custody. Despite the knowledge that most of their students were highly deficient and had limited amounts of time within the institution to overcome these deficiencies, teachers in some of the more ineffective sites seemed to approach classroom time as something to "kill" rather than as something to "allocate economically" (Wiley and Harnishfeger, 1974).

Substudy findings revealed that the more task engaged teachers were in instructional activities, the more task engaged were students. Furthermore, the more time teachers spent in providing instruction, the greater were the achievement gains. Ineffective sites were characterized by both observational reports and teacher reports that indicated a large proportion of teacher time being spent in activities other than instructional ones. In the more effective sites both students and teachers were highly task engaged, with 80 to 90 percent of students' time observed to be devoted to reading and math instruction over several observation points. For instance, one of the highest site-level averages for on-task time over the twelve weeks was obtained at a site where scheduled academic instructional time was most limited (e.g., students received one-half day of instruction each week day for 6 weeks followed by no instruction for 6 weeks), but where time on task was high.

Increases in instructional time gained by increased time on task has the advantage within correctional institutions of allowing the simultaneous pursuit of other institutional objectives (e.g., counseling, recreational activities)

and avoiding the competition of staff or programs for student time. Of course, this assumes that high levels of task-oriented behavior are combined with administrative scheduling practices that do not disrupt student class attendance for whatever amount of time is allocated for instructional purposes.

It has been previously recommended by the National Advisory Commission on Standards and Goals that educational and vocational programs in correctional settings should emphasize programmed instruction (Education Commission of the States, 1976). It was argued that programmed instruction allows for maximum flexibility in scheduling, provides for self-pacing, and provides immediate feedback on student progress. A similar recommendation for the use of technological 'aids' was based on the belief that such responses increased motivation, are standardized and validated, and may minimize the interpersonal problems of teachers and inmates (Reagen et al, 1976), presumably by reducing the need for interaction. The expansion of programmed instruction was also supported by the President's Task Force on Corrections in 1967 (Education Commission of the States, 1976).

Contrary to these recommendations, the substudy results indicate that the usage of programmed materials is negatively related to time-on-task-related activities and to achievement gains. In several of the effective sites, the philosophy was pervasive that technological aids were no more effective than teachers themselves in providing motivation once the novelty of the instructional resource had worn off. In all fairness to institutions where such instructional resources may be effectively utilized, it should be noted that teacher involvement and commitment, regardless of the instructional resources utilized, appeared to be related to high proportions of task-engaged activity and also to achievement gains. Because the frequent usage of programmed materials among these nine sites was often associated with a lack of teacher involvement in or commitment to instruction, it is difficult to determine which variable is actually demonstrating the relationship to a lack of achievement gains and task disengagement. One point is suggested by these findings: the usage of self-programmed or audiovisual resources may help to avoid negative teacher-student interactions, but it may also reduce desirable instructional interactions as well.

In summary, the combination of institutional commitment to educational objectives through the provision of uninterrupted delivery of instructional services, the presence of teachers committed to instruction, and the engagement of students in task-related activities, is likely to result in the demonstration of effectiveness in producing achievement gains. In spite of formal statements of the importance of education among institutional goals, institutions for delinquent youths are often not hospitable environments for education. While they may not be actively opposed to educational activities, educational goals are often not well integrated in many settings into the overall institutional goals. The findings of this study that badly needed training in basic skills is sometimes offered for very small amounts of time and that student schedules are additionally organized on an ever-changing basis in ways which diminish class attendance imply that basic-skills training must compete with a variety of activities within institutions. An equally important finding, however, is that correctional institutions do exist where educational goals are well integrated and effectively pursued within the constraints imposed by the nature of institutional confinement.

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# APPENDIX A

TABLES OF DATA RELATED TO TEST SCORES AND TASK-RELATED TIME

Table A-1. Differences Across Parallel Forms of the Domain-Referenced Tests

| | Phase II Results | | Substudy Pretest | | Substudy Posttest | |
|---|---|---|---|---|---|---|
| Forms | 1 | 3 | 1 | 3 | 1 | 3 |
| Subdomains: | | | | | | |
| Addition | .79 | .79 | .77 | .78 | .77 | .78 |
| Subtraction | .73 | .72 | .72 | .72 | .71 | .71 |
| Multiplication | .59 | .58 | .58 | .59 | .59 | .57 |
| Division | .56 | .53 | .53 | .52 | .52 | .51 |
| Literal Comprehension | .67 | .68 | .64 | .65 | .66 | .66 |

Tabled values are the average proportion of correct answers obtained by students in the nine sites participating in the substudy. None of the tabled differences was statistically significant at the $\alpha = .05$ level.

Table A-2. Mean Proportion Correct on Domain-Referenced Tests for Phase II** and Present Sample

| Arithmetic | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Operation Type | N | | OPERATION TOTAL | | FACTS | | INTEGERS | | DECIMALS | | FRACTIONS | |
| | Phase II | Present | Phase II | Present | Phase II | Present | Phase II | Present | Phase II | Present | Phase II | Present |
| Addition | 1149 | 612 | .78 | .78 | .98 | .97 | .91 | .91 | .61 | .61 | .36 | .36 |
| Subtraction | 1147 | 606 | .71 | .72 | .96 | .97 | .80 | .82 | .54 | .58 | .28 | .23 |
| Multiplication | 1130 | 593 | .59 | .59 | .87 | .90 | .55 | .54 | .28 | .28 | .32 | .29 |
| Division | 1065 | 533 | .53 | .52 | .85 | .88 | .40 | .43 | .41 | .17 | .13 | .09 |
| *Operations on single digit numbers | | | | | | | | | | | | |

| Literal Comprehension | | |
|---|---|---|
| Passages | Phase II | Present |
| 1 | .87 | .83 |
| 2 | .72 | .80 |
| 3 | .72 | .85 |
| 4 | .68 | .81 |
| 5 | .60 | .59 |
| 6 | .63 | .56 |
| 7 | .54 | .47 |
| 8 | .50 | .40 |

**Includes both Title I and non-Title I students from 30 randomly selected institutions for first testing.

Table A-3. Factor Scale Means for Phase II Student Sample and Present Sample at Nine Sites

| | Self-Esteem | | Locus of Control | | Peer Affiliation | | School Involvement | | Liking of School | | Attitudes/ Math | | Reading | | Teacher Support | | Practical Orientation | | Release Expectations Stigmatization | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Population | 6.1* | 6.0** | 8.0 | 7.6 | 2.3 | 2.3 | 2.3 | 2.4 | 2.9 | 2.6 | 1.9 | 1.9 | 2.2 | 1.5 | 5.0 | 5.3 | 3.2 | 2.7 | 2.5 | 2.8 |
| Site | | | | | | | | | | | | | | | | | | | | |
| 1 | 6.2 | 6.1 | 9.0 | 7.9 | 2.1 | 2.2 | 2.3 | 2.2 | 2.7 | 2.2 | 2.0 | 1.4 | 2.2 | 1.5 | 5.1 | 4.6 | 3.3 | 2.5 | 3.1 | 2.8 |
| 2 | 6.1 | 6.2 | 7.2 | 7.5 | 2.6 | 2.0 | 2.0 | 2.6 | 2.5 | 2.3 | 1.8 | 2.0 | 1.8 | 1.6 | 5.0 | 5.3 | 2.7 | 2.6 | 2.3 | 2.6 |
| 3 | 5.5 | 5.7 | 10.0 | 9.3 | 2.7 | 2.8 | 2.4 | 2.2 | 3.2 | 3.3 | 1.8 | 1.8 | 2.1 | 1.3 | 6.0 | 6.0 | 3.9 | 2.9 | 3.3 | 3.2 |
| 4 | 6.0 | 6.2 | 8.7 | 8.5 | 2.5 | 2.7 | 2.3 | 2.8 | 2.6 | 3.2 | 1.7 | 2.2 | 2.2 | 1.6 | 5.7 | 6.2 | 3.3 | 2.9 | 3.2 | 3.1 |
| 5 | 5.9 | 5.7 | 8.2 | 7.2 | 2.5 | 2.5 | 2.1 | 2.4 | 2.6 | 2.7 | 1.8 | 1.8 | 2.2 | 1.7 | 4.6 | 4.5 | 2.7 | 2.4 | 2.4 | 2.5 |
| 6 | 5.9 | 5.8 | 7.5 | 6.7 | 1.9 | 2.0 | 2.1 | 2.3 | 2.3 | 2.5 | 1.7 | 1.6 | 2.3 | 1.4 | 4.4 | 5.0 | 3.0 | 2.6 | 2.5 | 2.4 |
| 7 | 5.9 | 6.0 | 7.4 | 6.3 | 1.9 | 2.1 | 2.4 | 2.4 | 2.6 | 2.6 | 1.9 | 2.0 | 2.3 | 1.7 | 5.0 | 5.3 | 3.1 | 2.6 | 2.6 | 2.6 |
| 8 | 5.8 | 6.1 | 7.7 | 7.6 | 2.3 | 2.3 | 2.3 | 2.3 | 2.6 | 2.6 | 1.7 | 1.9 | 2.5 | 1.5 | 5.4 | 5.4 | 3.4 | 2.6 | 3.1 | 3.0 |
| 9 | 6.4 | 6.3 | 8.3 | 8.1 | 2.2 | 2.3 | 2.6 | 2.6 | 3.0 | 2.6 | 2.0 | 2.0 | 2.3 | 1.7 | 4.7 | 5.2 | 3.5 | 2.9 | 2.6 | 2.6 |

*Left-hand column contains the means for Phase II sample.
**Right-hand column contains the means for present sample.

Table A-4. Average Initial Performance and Average Change by Site

| | | Reading | | Mathematics | | Practical Achievement | |
|---|---|---|---|---|---|---|---|
| | | Pretest | Change | Pretest | Change | Pretest | Change |
| Total Sample: | Mean | .65 | -.03 | .67 | -.004 | .65 | .01 |
| | s.d. | .25 | .21 | .16 | .12 | .26 | .18 |
| | n | (594) | (347) | (531) | (288) | (599) | (356) |
| Site Number: | | | | | | | |
| 1 | Mean | .67 | .124 | .66 | .068 | .71 | .029 |
| | s.d. | .30 | .28 | .22 | .20 | .24 | .22 |
| | n | (47) | (33) | (40) | (27) | (48) | (33) |
| 2 | Mean | .69 | -.179 | .65 | -.005 | .66 | -.040 |
| | s.d. | .19 | .26 | .14 | .09 | .24 | .20 |
| | n | (107) | (39) | (78) | (23) | (108) | (41) |
| 3 | Mean | .82 | .23 | .84 | .011 | .80 | .018 |
| | s.d. | .13 | .08 | .12 | .07 | .20 | .09 |
| | n | (65) | (46) | (63) | (44) | (6?) | (45) |
| 4 | Mean | .78 | -.023 | .70 | .029 | .75 | .066 |
| | s.d. | .23 | .15 | .14 | .07 | .25 | .14 |
| | n | (33) | (22) | (31) | (20) | (36) | (25) |
| 5 | Mean | .65 | -.0005 | .68 | -.025 | .66 | .051 |
| | s.d. | .26 | .16 | .12 | .05 | .21 | .14 |
| | n | (36) | (25) | (33) | (20) | (36) | (25) |
| 6 | Mean | .65 | -.031 | .63 | -.024 | .61 | .025 |
| | s.d. | .26 | .14 | .14 | .10 | .23 | .16 |
| | n | (74) | (51) | (70) | (47) | (74) | (55) |
| 7 | Mean | .50 | -.048 | .62 | -.009 | .51 | 0.061 |
| | s.d. | .27 | .24 | .18 | .16 | .35 | .25 |
| | n | (74) | (38) | (66) | (34) | (76) | (38) |
| 8 | Mean | .56 | .067 | .65 | -.020 | .61 | .015 |
| | s.d. | .24 | .21 | .15 | .12 | .24 | .17 |
| | n | (97) | (62) | (92) | (50) | (97) | (63) |
| 9 | Mean | .62 | .019 | .66 | -.042 | .66 | .011 |
| | s.d. | .23 | .19 | .11 | .09 | .24 | .17 |
| | n | (61) | (31) | (58) | (23) | (61) | (31) |

Table A-5. Proportion of Task-Related Allocated and Attended Class Time Over Observations by Site

| | WAVE 2 | | | | WAVE 3 | | | |
|---|---|---|---|---|---|---|---|---|
| | Proportion of Allocated Time | | Proportion of Attended Time | | Proportion of Allocated Time | | Proportion of Attended Time | |
| Site | Day 1 | Day 2 | Day 1 | Day 2 | Day 1 | Day 2 | Day 1 | Day 2 |
| 1 | .31 | .38 | .53 | .62 | .21 | .19 | .57 | .59 |
| 2 | .25 | .13 | .54 | .40 | .27 | .25 | .52 | .48 |
| 3 | .84 | .80 | .90 | .88 | .81 | .90 | .85 | .91 |
| 4 | .62 | .43 | .76 | .66 | .61 | .53 | .72 | .73 |
| 5 | .65 | .40 | .91 | .90 | .81 | .92 | .81 | .92 |
| 6 | .31 | .41 | .56 | .76 | .23 | .12 | .46 | .65 |
| 7 | .47 | .41 | .58 | .55 | .33 | .31 | .52 | .58 |
| 8 | .48 | .45 | .53 | .57 | .40 | .31 | .57 | .49 |
| 9 | .49 | .46 | .57 | .62 | .46 | .39 | .61 | .63 |

# APPENDIX B

## CASE STUDIES OF THE NINE SUBSTUDY SITES

Site Number 1

Located near a large metroplitan area, this minimum-to-medium-security institution was designed to hold 96 residents and currently houses 135. Most of the residents fall in the range of 14 to 17 years of age, and have been committed for either their first or second time as adjudicated delinquents. Girls comprise less than 15 percent of the total population. More than one-half of the residents are white. Many of the students exhibit severe behavior problems.

Some of the residents live in sparsely furnished individual rooms; the rest are housed in overcrowded living units, each of which contains two 12- to 14-bed dorms. These dorms are surrounded by glass observation areas, and the residents are locked in at night. Beds are separated by heavy metal lattice screens and the windows are barred. Each living unit has a small kitchen, a dining area, and office space for the treatment team coordinator and custody personnel. Incoming students are placed in living units according to a psychological classification previously determined at regional diagnostic centers.

The emphasis at this facility is clearly on security and treatment; academic programs are adapted to the philosophy and scheduling of the treatment team activities. Two teachers are assigned to each treatment unit of 24 youths to instruct students in basic skills. The major focus of instruction is centered around GED preparation and career skills. Students are required to attend two classes scheduled for large blocks of time (2 hours each) five days a week. However, a variety of other institutional activities introduces large variations in the amount of scheduled instructional time. As a reward for attending classes, students are allowed to participate in institutional work and vocational programs for which they receive the prevailing minimum wage rate of pay. This appears to offer a motivational factor that might contribute to school performance.

Students in each living unit attend classes in cottage groups formed on the basis of an assessment of socio-emotional development, regardless of academic achievement level. Instruction is individualized. Teachers function less as

instructors and more as facilitators--providing guidance on self-correcting GED workbook activities, for instance. Students were observed to be surprisingly self-motivated and task-oriented, considering the fact that teachers themselves spent little time in actual instruction. Teachers tended to view their role as one of providing emotional support to students rather than academic instruction.

In addition to classroom activities, teachers in this institution spend a large part of their time performing non-academic duties such as supervising the mid-day meal, assisting with physical education activities, participating in daily treatment sessions, and escorting students around institutional grounds. Such functions were described by teachers and the EPA to serve the function of integrating the environments of education and institutional life.

Although students are assigned to classes for specific hours of instruction, many other activities can take precedence over class attendance. Students are frequently absent from classes to attend counseling sessions or other activities within the treatment program.

At an off-site diagnostic center, the newly committed residents, most of whom had attended public high schools, are given the Wide Range Achievement Test to determine their functional grade levels in the areas of reading, math, and language arts. The results of this pretest place a majority of the students at the elementary-school level. Students are considered Title I participants if they pretest at two grades or more below their expected grade level.

All students receive instruction in reading, physical education, math and language arts. Depending on the types of teachers assigned to their living units, some students also attend classes in science, health and social studies. Some receive vocational education, but no distinction is made between Title I and non-Title I students in this area. Teaching techniques do not vary as a function of whether or not the students are Title I, but simply reflect an individual teacher's skills, experience, and attitudes toward the education of institutionalized youth. Generally, responsibility for instruction is unstructured.

Students are allowed to work on tasks of their own choosing. Only for those students in the Title I aide's class are individual performance objectives established and regularly updated. The Title I aide uses self-made instruments for this purpose.

The education program is rich in materials such as SRA reading kits, non-text books, Hoffman Readers, Reader's Digest Skill Builders, career education literature, newspapers, magazines, teacher-made and commercial worksheets, and paperback novels. Materials are shared by all teachers and students.

The institution's treatment team philosophy, evidenced in the staffing of each unit with custody, treatment and education personnel, seemed to facilitate good communication among most staff members. Some vocational education teachers did voice opposition to the emphasis placed on psychological counseling, and believed that additional class time would better serve the students' needs.

Staff-student interactions were observed to be highly supportive. In general, students seem to be allowed freedom of individual expression: long hair, head bands, smoking in classrooms, and addressing teachers by last names only (rather than the customary "sir" or "Mr.") were very much the norm. One teacher-posted sign in a reading class read "You are only as smart as you think you are," which is a different atmosphere than some other institutions where students are continually told that they are <u>not</u> as smart as they think they are. The low-keyed and personal interaction of students and staff is a result of the institutional emphasis on role modeling. Staff agreed that the individualized attention afforded to all students by the various members of their treatment teams results in improvements in the students' attitudes toward their own abilities. Despite the favorable teacher and observer reports of student attitudes, however, students at this site gave teachers the lowest rating among all sites on the perceived support of students.

Site Number 2

This institution for teenage offenders, operated by the Department of Corrections, is pragmatically considered to be a maximum-security facility for delinquent offenders, although an even more secure maximum facility operates in the state. State definitions of security classify this institution only as minimum-security. It is filled beyond its capacity of 225 residents. The co-ed population consists of two types of commitment statuses: about 60 youths are confined only for court-ordered diagnostic evaluation purposes and are confined for one month; the rest are status offenders and adjudicated delinquents who are confined for an average of six months. Two-thirds of the residents are male. Over one-half are non-minority members, and most of the residents are between 14 and 17 years of age.

Security measures are quite visible at this comparatively modern facility, such as the surrounding chain-link fence with barbed wire on top. Entrance to the compound is controlled by two sets of electronic gates. Once inside, the residents are allowed to move about freely and to interact with each other openly. Plainclothed guards can be observed on the grounds. No security guards are on duty in the school building, but the classrooms are equipped with telephones which ring continuously due to what appeared to be a poorly organized system of checking attendance. Students may enter and leave the school building unescorted.

The residents occupy individual rooms in cottages and are supervised by house-counselors who provide both security and treatment. Four cottages house the youths who are confined for diagnostic purposes. The girls' cottages are overcrowded--several of the residents sleep in the hallways. One cottage serves as a lock-up unit.

The general atmosphere at the facility is oppressive. Student motivation seems directed toward getting along within the system until their eventual release or transfer. There are no apparent goals set out within the institutional or the educational program except for those developed by individual teachers.

Students did not have much of an indication as to their release date. Furthermore, teachers were not notified about release decisions often until after the student had left the institution.

The use of lock-up for disciplinary reasons was frequent. At times entire cottages were detained without teacher notification. Incidents were observed where inmates in locked cells were harassed and baited by custodial staff with threats of withholding privileges and extended lock-up sentences.

Residents are outspoken and frequently use aggressive language with each other. They reported highly negative attitudes toward the staff on questionnaires, but were observed to be more moderate in their actual interaction with staff. They dress in their own clothes, which are often torn or unclean. Many are visibly angry and hostile; some are scarred from attempted breakouts, and a large proportion of the resident population is tattoed, "Mi Vida Loca" (My Crazy Life) being a popular tattoo. Some students were observed to be wearing sandals or shoes where the backs have been removed as a symbol of restricted movement for those who have attempted escape.

The education facility has been segregated in terms of separate male and female units, then integrated, and subsequently resegregated all within a six-month period in attempts to alleviate behavioral and disciplinary problems. Reportedly, no successful solution has been reached.

On arrival at the institution, students are tested with the Illinois Testing of Psycholinguistic Abilities, and the Detroit Test of Learning. According to the EPA, half the students arrive at the facility functioning between the sixth- and eighth-grade levels; the rest are equally divided between those functioning above the eighth grade and below the sixth grade.

Any student achieving below an eighth-grade level, or two grades below his expected level, is considered eligible for Title I instruction. Once assigned to a Title I class, students are given the Stanford Achievement Test in math and the Nelson Reading Test to pinpoint more accurately their functioning grade

levels. Most Title I students function between the fourth- and sixth-grade levels. All eligible students--usually about 75 percent of the population--receive Title I services. Students generally remain in the program until they are released from the facility; they are rarely promoted to the regular education classes.

The updating of individual performance objectives in the Title I classes varies from teacher to teacher--some revise them continuously, while others review them every few months through standardized tests.

The Title I curriculum includes courses in life-skills, English, math, and two levels of reading. Regular education classes are math, social studies, job survival, and laboratory science. The vocational education program (considered pre-vocational) offers training in homemaking, clerical skills, woodworking, leathercraft, and arts and crafts. No communication takes place between the academic and vocational teachers, and very little between the Title I and regular education staff members.

Classes are held five hours a day, five days a week. Attendance in regular education classes is required for all students. They attend two-hour blocks of combination reading and math classes, although class attendance is sporadic due to frequent lock-ups and the lack of an adequate system of accounting for absentees.

Instruction in both Title I and regular classes is individualized. Most of the materials used are standard commercial textbooks; some of them are self-instructional. The EPA and the teachers consider individualized instruction to be the most effective teaching method, and one Title I teacher credited this approach for students' achievement of four years' progress in four months of remedial instruction. Observers noted, however, that no apparent institution goals exist to motivate students toward GED completion or to establish a liaison to facilitate public school re-entry.

The teachers at this facility are exposed to an unusually large quantity of inservice training. With the help of the Department of Corrections Title I coordinator, the EPA is kept informed of a variety of state- and federally-sponsored inservice programs such as Right to Read, Project Read, Teachers Corps, and university courses. Although attendance is not mandatory, all the teachers (regular and Title I) and the EPA reportedly participate. The incentives for attendance include paid release time and, occasionally, college credit. The Title I coordinator visits the site once a month for monitoring and twice a year for evaluation.

Site Number 3

This open-residential juvenile institution for delinquents is located in a rural area approximately 20 miles from a mid-sized city. The institution has no fences, guards, locked doors, or any overt security measures. The only factor that distinguishes resident dormitories from college campus dorms is the existence of one or two security lock-up rooms in each dorm. The combined capacity of the dorms is approximately 100, although the administrator reports overcrowded conditions at present. Students live in one- or two-person rooms and appear to have the freedom to decorate them as they like--the rooms are bright and appealing. There is one security guard on the whole site; his stated function is not to keep the students from leaving but to keep outsiders from intruding.

Over half of the residents are white, and the remainder are minority members. Most of the residents are between 14 and 17 years of age. All of the residents are adjudicated delinquents, but state law does not distinguish between status offenders and delinquents. Most of the residents were committed for status offenses. The institution is frequently used by judges as a holding facility for juveniles awaiting trial, as an alternative to incarceration in the county jail. This practice sometimes causes difficulties for the school, since the status of these residents is unclear to the residents themselves and to other students. Apart from these detainees, the average length of resident stay is 10 months.

A high priority is placed upon education among the various institutional activities; this has resulted in well-integrated and cooperative efforts of the entire institutional staff. All of the staff members appeared to be highly competent and well-experienced, were extremely supportive of residents, and had high expectations for their students' educational performance.

The entire staff spends a great deal of time assessing student performance. For example, when students appear to lack motivation, their capabilities are reassessed, and they may be moved from one instructional group to another. Prescribed goals seemed realistic in terms of what students could achieve; at

the same time, staff encouraged students to work to their full potential and to achieve as much as possible.

Both treatment staff and education staff meet one afternoon a week for two and one-half hours to discuss the dorm/social performances and educational performances of each student on campus. These meetings are designed to prevent gaps in communication between treatment staff and educational staff members. The meetings give teachers an awareness of their students' non-academic behavior and give the counselors and dorm staff some familiarity with the residents' scholastic behaviors.

Decisions regarding requests for weekend leaves-of-absence are reached at those meetings. School performance is a very important criterion in decisions about release. The facility director reports that release decisions are made 50 percent on the basis of school performance and 50 percent on the basis of social living/dorm performance.

The entire institutional staff and program are geared to milieu therapy. This is reportedly the key to the overall success of the institution. The general atmosphere at this institution is one of very strong and positive treatment orientation. Concepts set forth in transactional analysis and Glasser's reality therapy are employed in the treatment program. Reportedly, custody concerns are only necessary because residents have been sent to the institution by the court and are ordered to be confined.

Dormitory staff, counselors, administrators, and teachers are all involved in preparing students educationally and socially for life outside the institution. Towards this end, groups are formed that consist of approximately 10 to 12 students (one member is a student group leader), a counselor, and a resident advisor. This group meets daily and is responsible for monitoring the behavior, attitudes, educational performance, and social performance of its members. Group members are expected to discuss their own problems and to support other members' discussion of problems and concerns. The peer group has several powers; it can take away a student's recreation privileges, or make recommen-

dations regarding furloughs or releases. The resident advisor and counselor are in attendance at the meetings and can help the group make decisions, but the staff reported that students generally make their decisions independently. The group's decisions can be vetoed by the full staff, but reportedly this veto is rarely used because the groups do a good job. There is very little concern about discipline; one teacher who had been at the institution for several years reported that she had never had a disruptive occurrence in any class.

Each resident goes through a needs-assessment upon admission to the institution. The results of tests and an interview with staff are used to determine educational needs; however, the placement of the student in the appropriate living group takes precedence over educational placement. The five groups on campus fit into a continuum of socially passive to socially aggressive. Students attend all activities by group--classes, meals, and recreational activities. If a student's educational needs are different from those of the rest of the group (for example, a socially aggressive resident who also needs a lot of remedial help in reading), he/she is still placed in the appropriate social group but given the necessary extra tutorial help.

The major focus of the institution is clearly on academic education. There are no stated educational performance objectives other than the global one of getting students up to grade-level in reading. Regular education classes include English/language arts, history, math, business education, home economics, personal grooming, physical education, and science. There are no vocational education classes offered because the primary function of the program is to return the students to academic education in the public school system at their appropriate grade level.

There is no real distinction between the Title I and regular education program. The Title I classes are integrated into the regular education program and Title I students attend regular education classes. All teachers work closely together and are supportive of basic-skills goals.

The education program is set up in seven-week blocks: six weeks of classes and one week for evaluating students, the program, instructional materials, etc. At this time reports are written on each student by each teacher and by the counselors. Classes are rotated to break the routine.

Instructional approaches varied from class to class, according to the heterogeneity of the student group, the subject matter, and the predilection of the teacher. Even though the classes were fairly large in comparison to other sites (approximately 15 students per class), there is a large amount of student-teacher interaction. The classroom atmosphere was observed to be serious and businesslike and students were task-oriented for almost the entire amount of classtime.

The educational program did not report nor was it observed to be lacking in resources. Teachers were observed to be innovative and variable in their approach to teaching and the use of materials. Teachers reported little reliance on audiovisual equipment or teaching devices. Students worked with textbooks and were assisted individually by aides and teachers.

In this educational program, an attempt has been made to replicate a public school setting and to provide students with an educationally- and socially-stimulating environment. Students attend six academic classes daily, five days a week. They receive homework assignments and are assigned books that they are expected to read in their free time. Much emphasis is also placed on personal grooming and physical education. Students are required to attend the 'Y' on a designated afternoon to participate in various sports activities. Students can be observed jogging on the institution grounds during their free time as part of an institution-wide fitness program in which staff members also participate.

Teachers and counselors were generally young, many of them having come to the facility directly from their undergraduate training. Two of them had advanced degrees and two had not completed college. The institutional director has direct responsibility for hiring staff, and administrative staff reported that

they have had no difficulty employing personnel at any level. The communication channels between staff and administrators appeared to be open; the weekly staff meetings clearly helps this communication process. The entire staff takes part in decision-making, and the process seemed truly democratic and effective.

Virtually no technical assistance was received from the state level. Inservice training was almost non-existent; the EPA had attended only one two-day inservice workshop in the last four years. The EPA stated that she was not in favor of teachers becoming 'workshop hoppers'. Geographical distance, furthermore, made it difficult for staff to attend workshops or for speakers to come on site. However, several education staff members were attending or had completed post-graduate courses on their own.

Site Number 4

Located in a rural area, this minimum-security institution, operated by the Youth Authority, houses 60 youths from 15 to 17 years of age. The small size of the institution reflects a statewide push for decentralization of correctional institutions. The effect of this decentralization is that residents are generally in close geographical proximity to their families. This is one of few sites where family supportiveness can be and is incorporated into institutional programming.

Most of the residents are adjudicated delinquents, and about 15 percent are status offenders. About one-half have had at least one previous institutional commitment. The resident population is about 70 percent non-minority and 30 percent minority. Administrative staff reported that the resident population is a more select group than was previously the case. Students sent to this institution are generally the physically smaller students who would not do well in larger institutions. Increasingly, more students are confined in this institution who had previously been labelled "special education" students, and are reportedly sent to take advantage of the highly individualized basic-skills instruction.

The institutional program is highly structured, and the main emphasis (supported by all staff) is the provision of a comprehensive education program. Security measures consist only of attendance checking and some restriction of movement; permission is needed to move from building to building; eating tables are assigned, and free time is spent in a designated location, such as the recreation room, under the supervision of a caseworker. Students are assigned to specific classes or work areas for each hour of the day. The director of social services credits this tight structuring of time for the absence of conflict and disciplinary problems.

The disciplinary system utilized at this institution is a joint effort of both staff and students. An officially-produced form is used that has two sections for the filing of a complaint: in one section the teacher writes out the complaint and in the other section the student states his/her position. The

underlying philosophy for this system is twofold: students feel their side is being heard, and students are allowed to vent their anger through written statements rather than the usually more abusive verbal interactions. The student then meets with the principal to discuss possible outcomes. Extra assignments are usually used as sanctions, and supervision of these sanctions is coordinated with the cottage director.

Groups, consisting of a child care worker, a social worker, and about ten residents, meet once a week, and a weekly assembly is also held for all residents. The purpose of both meetings is to air problems, to encourage whole-group solidarity, and to prevent the formation of small-group or gang pressures.

Upon their entrance, residents are given the Wide Range Achievement Test, the Stanford Achievement Test, and the Spoche Reading Test. From this needs-assessment, an individualized program is prepared for the student and is updated every four to six weeks. The EPA and the teachers felt that these procedures were highly effective in defining students' needs.

Of the 60 students, 50 receive Title I instruction in addition to attending regular education classes. They are divided into two priority groups: those functioning below the sixth-grade level, and those functioning one to two grades below their age-specific grade level. Teachers felt that only a small percentage of their students had learning disabilities (despite their previous labeling), and that with time and individualized instruction, most achievement deficiencies could be remedied.

The goal of this institutional program is to get residents involved in as many different kinds of experiences as possible. For instance, residents are responsible for having designed and constructed several of the buildings on-site. They care for pets and participate in local community activities. Residents participate in area sports and are recognized as forming tough, competitive teams. On the whole, resources are adequate for a wide variety of activities. The director often negotiates resource exchanges with the community; for example, the residents are allowed to use a public swimming pool in exchange for

their labor on specific projects. In order to encourage the development of self-control and responsibility, residents participate in a local Head Start program and are responsible for the instruction of younger children. This activity is designed to promote feelings that institutionalized youths can be masters rather than victims of fate, and that they can give as well as receive support.

The education program is staffed by three regular education teachers, three Title I teachers, two vocational education teachers, and the EPA, who also serves as the Title I coordinator and diagnostician. Both the facility director and the EPA (as well as observers) felt that the education staff members were not only highly qualified, but were also highly motivated to instruct and were interested in student development.

Teachers at this institution are very supportive of students, spending most of their institutional time as well as classroom time engaged in instruction. Students likewise were observed to be highly task-oriented. Instruction receives a great deal of emphasis among institutional activities, and is strongly supported by both the EPA and the institutional director. Observers differentiated this institution from others in the sense that while students appeared to have emotional or behavioral problems (although their offenses were not as severe), these were perceived differently by the staff. Staff tended to view each student as having potential for change and improvement in both the academic and emotional realms. Student failure on tasks was not viewed negatively. Teachers described their jobs as ones of constantly providing alternative tasks, or in other ways motivating students to continue despite failures.

Teachers were consistently characterized by observers (on all days of the visit, on all visits, and during all three years of the evaluation) to be virtually limitless in their abilities to provide alternative learning tasks and to stimulate other student learning interests when the first signs of task boredom were evidenced. Given the lengthy teaching day (seven hours), observers expressed fatigue in merely making observations on the level of teachers' in-

structional activity. Interactions among teaching staff were reported to be excellent.

The education program offers a General Equivalency Diploma preparatory program, a high school re-entry program (credits are transferrable to the student's high school), Title I remedial classes in reading and math, and vocational education classes. Students may also take high school correspondence courses. The high school re-entry program includes classes in English, science, math, career awareness, and life skills. Title I instruction is conducted in a laboratory environment. Vocational classes focus on woodworking and construction; experience in other vocational skills, such as maintenance, gardening, laundry, and kitchen duties, is gained during work assignments.

The school operates from 8:30 to 4:30 and consists of 10 periods lasting 40 minutes each. A few students spend some time on work assignments (laundry, maintenance, gardening, etc.) on a rotating basis. The rest attend school for either the morning or the afternoon session. Classes attended are remedial reading and math (individualized lab approach), English and science. Though the latter two are not specifically identified as remedial, the level of instructional content is low. All students also attend a special fifth period.

The education program has designated a special day of the week where the schedule changes. On this day, <u>all</u> students attend three of the four classes in the morning. Since all attend of necessity, these classes are different student groupings than occur on customary days. Groupings are based on the special needs of students. For example, the reading teacher identifies a group of students having difficulties. These students are scheduled for reading in a group different from the one normally attended. A special fun period is designed to enhance the game aspects of reading and math instruction. Groups selected on the basis of social aspects are intended to assure that students are allowed and forced to interact on a group level with different types of students. Each student attends school only three periods on this day. The rest of the day for teachers is spent in interactions with cottage staff, coordinating information on students, etc.

Much of the administration and scheduling of programs at this site appears to be designed to avoid boredom and to force student-student and student-teacher interactions. For instance, the fact that each student is taught by every teacher, that student groupings constantly change, and that schedules change maximizes such interactions. Such changes are facilitated by an efficient administrative structure that supports and promotes changes as necessary for student development, rather than opting for a more smooth-functioning and systematic schedule. This practice is unlike most other institutions where administrative ease appears to be the basis for scheduling, or where students are perceived as behavioral problems, and thus consistent but limited and stable interactions are viewed as the best therapy. In these latter situations, small groups of students interact in academic, social, recreational, and treatment realms with the same staff and the same peer group.

Educational expectations are high on the part of students as well as teachers. Most students interviewed felt that they could complete college; several pointed out that this belief represented a major change in their attitude toward school. This level of expected educational achievement was quite high considering the fact that most residents had not been attending public schools in the year immediately preceding their confinement.

The educational program had an excellent library and was well supplied with controlled readers, language masters, calculators, tachistoscopes, reading and math kits, and other equipment. Within classrooms, however, there was no evidence of any audiovisual or self-programmed equipment. On the contrary, teachers themselves were the principal elements in instruction, often utilizing teacher-made instructional materials.

During the weekly staff integration meetings, education and treatment staff members discussed the progress of ten students. Each student comes up for discussion every five weeks, or more often if the staff feels that closer monitoring is needed. The integration meetings focus on reports written by teachers, child care workers, and social workers. All staff members and administrators are in attendance. After each student's report has been read

and discussed, the head social worker prepares a composite report that is later discussed with the student.

Education staff reported receiving a great deal of assistance from the Title I staff of the Youth Authority; staff members monitor the program monthly and visit the site several times a year. The Youth Authority evaluates the program by reviewing monthly reports submitted by the institution; these reports include pretest and posttest data for students leaving the program in that month. In addition, the EPA reported that Youth Authority personnel were available to answer questions and give advice. According to the EPA, the Youth Authority was instrumental in planning all aspects of the Title I program, and was especially helpful in developing needs-assessment procedures. Since the Title I program was implemented, staff reported that a new emphasis was placed on teaching basic skills and on diagnosis of learning disabilities.

The atmosphere at this institution is one of high expectations for residents, not only in education but also in community life. Many staff members suggested that residents generally fulfill realistic expectations. Students were reported to enter the program with negative feelings toward school, institutional staff and life in general. Staff reported that the students often develop new and positive attitudes toward themselves and toward their ultimate re-entry into the community.

The facility director reported that only 15 percent of the released residents are eventually recommitted to correctional institutions. Teachers attributed their successes to the individualized instruction they were able to provide students.

Site Number 5

This institution is a rurally-located, minimum-security institution for male youth and is under the supervision of the Department of Corrections. Designed to house 75 residents, there is presently a population of 67. Residents themselves built the structures housing the vocational program and the academic education program.

Students are free to walk around campus unescorted, and no use of locks in classrooms or any other building was evident. There are no guards or gates at the entrance or around the institution.

Residents are sent to the institution from the entire state. The institution is reported to have a reputation as a strict disciplinary place. This reputation results in residents being sent here who have more serious behavioral problems and offense histories. Evidence of this severity of behavioral problems, however, is hard to find. For instance, students appear to have developed a real interest in their dress and appearance; activities are very orderly, and order is maintained despite the absence of teachers or other staff. Despite institutional emphasis on discipline and hard physical exercise, interactions between staff and residents are highly supportive. Teaching staff have much institutional experience and they interact with each other positively to coordinate all aspects of the institutional program. They also interact with students on all aspects of their institutional life and thus report that they have developed an integrated approach to meeting students' needs.

Upon his arrival, each student is assigned to a group of about eight peers who are considered to have similar personalities. Each group has a trained staff group leader. The staff is responsible for the implementation of a peer-influence program, utilized as a treatment modality for all students. The student interacts in all phases of institutional programs through his group. The group's primary responsibility is to help its members resolve the problems that initially led them into trouble, and to help attain the release of each member.

Prior to entering the regular education program, each student is tested to determine his functioning grade level. The education staff at the facility expects residents to obtain a high school diploma through participation in the GED program, or to pursue a curriculum that will enable a student to re-enter the public school system. For those students not capable of achieving a GED diploma, or who do not plan to return to public school, the staff tries to provide as much vocational knowledge and experience as possible to help them function more successfully after they leave the facility. All residents are involved in the educational program at the institution. The education program is organized so that students attend classes daily for four forty-minute periods. Classes are basically remedial reading, remedial math, and GED preparation. Because of an alternating six weeks of institutional work and six weeks of school schedule, students receive a total of about six months' educational exposure during a year's stay.

The importance of academic education among institutional activities is evidenced by the use of an 'hour' accounting system, where students can earn up to 16 hours per day towards release. Hours can be lost for failures to maintain a certain academic GPA, and failures to participate in group sessions can result in a reduced GPA. Group pressure to perform well is said to be exerted at meetings. The EPA makes almost all final decisions toward release.

The education program emphasizes individualized instruction. The teacher's role in this program is to act as a resource person and to help those with special problems. There are no class lectures, and each student's program is individualized. Classes are scheduled with ten students for each teacher, but classes seem to be actually smaller, probably due to the high task activity of the students. For example, a few of the apparently lower-level students were receiving constant instruction from the teacher. The remaining students were intently engaged in programmed cassettes or reading materials, and did not appear to need much teacher direction.

Class time was almost entirely scheduled for learning tasks. For example, students were given about 30 seconds to begin their individual tasks, and

teachers kept students on task until about one minute prior to the end of the class session, at which time they were instructed to put their materials away. All teachers reported that they emphasize self-control, self-motivation and independence. They do not spend much of their classroom time in actual instruction, and perceive their role to be one of encouraging self-motivation rather than actively attempting to motivate students through various instructional methods. A great deal of effort is placed on preparing students for their GED test. Out of 70 students taking GED examinations recently, 60 students passed the test.

To be released from this institution, a resident must meet the following requirements: have completed GED requirements or have progressed six grade levels from his entry point in the education program; have an employment offer or plans to continue further with his education, such as enrollment in vocational training, public schools or in a college; have received a positive recommendation by his group; and have received a positive recommendation by institutional staff.

The staff technically consists of five teachers, 14 custody/treatment staff, an institutional director, and EPA who also serves as a teacher, two part-time psychologists, and three part-time counselors. There is no custody staff in the usual sense at this institution, since all staff serve as custody staff as well. This differentiation of staff according to roles, however, is rather meaningless at this institution. Almost all staff function in all roles; this is especially true for teachers. The apparent result is that all institutional goals and activities are well coordinated. Education is not necessarily the major activity within the institutional program, but the scheduled time allocated for instructional purposes is never usurped or subverted by other institutional events.

Educational staff were well-experienced, having an average of five years of experience in institutional teaching. Despite the unpretentious character of the EPA, he provides strong leadership in both the education program and institutional operations. He is responsible for organizing residents' entire daily

activities, yet his role as an administrator does not overshadow his personal interaction with students.

Site Number 6

Situated near a small town, this institution was designed to house 300 youths, but now has a population of 475. Residents' ages range from 8 to 20, with the majority being 16 or 17; all are adjudicated delinquents. Fifty-five percent of the total population are minority, and 40 percent have had at least one prior institutional commitment. The average length of confinement is five- and one-half months.

Although the school has only four staff members who are classified as custody staff, all personnel are involved in the security of the institution. Security measures appear to be minimum, but staff have trained bloodhounds, and local authorities assist when residents run away. There are no fences or guard towers on campus and most residents move freely on the grounds.

Residents are classified into four categories. Students classified as Category 1 offenders are usually first offenders and have committed crimes against property. Seventy-five percent of the residents in the program are so classified. Category 2 is for those residents who are considered dangerous to themselves or to others in the program. Most Category 2 residents are repeat offenders and have a history of juvenile crimes. Their minimum length-of-stay in the program is four and one-half months, and 20 percent of the current population falls into this category. Category 3 is for crimes that resulted in serious injury or death, or for chronic youthful offenders. These residents come up for program review every six weeks. Category 4 is for those first offenders who have committed minor or status offenses. These residents are permitted to earn special privileges for good behavior, including furloughs. Only about 2 percent of the current population falls into this category.

There are four levels that indicate a resident's progress through the program. Since the state sentences youths to the program for indefinite sentences, a resident must progress from level 4 to level 1 in order to be released from the program. Levels cannot be skipped. Resident progress is reviewed every three weeks except for those in Category 3, whose progress is reviewed every six weeks.

Residents are placed in one of five clusters, with three cottages to a cluster. Cottage assignment is on the basis of physical size and age; classification categories and program level play only a minor part in residential placement. Each cottage has three or four houseparents who work in eight-hour shifts so that someone is always on duty. Houseparents also conduct group counseling sessions using Glasser's reality therapy. Although most houseparents have not had formal training in group therapy, inservice training is provided.

There is a maximum-security cottage where residents are sent for disciplinary reasons, and where residents are locked-up for twenty-four hours a day. Length of stay in maximum security can range from one day to several weeks, depending on the nature of the offense. For most decisions resulting in student lock-up, educational staff do not participate in decision-making. Cottage staff inform the educational administration when such actions have been taken.

The academic program in this institution is centered around eight large classrooms, each staffed with two instructors and two teacher aides. Thirteen of these aides and three of the teachers are Title I personnel. The curriculum is individualized and relies heavily on instruction with self-programmed audiovisual equipment. The academic program is accredited by the state Department of Education. Additionally, the education program has a Title I reading lab (staffed by a Title I reading specialist, a Title I teacher, and Title I aides) and a Title I math lab (staffed by two Title I teachers and a Title I aide).

Each of the eight classrooms has at least one Title I teacher or aide. Title I equipment and materials are found in all classrooms. Students are assigned to classrooms according to housing units. Various academic subjects are taught, with the primary emphasis on basic skills in reading and math. Students are sent to the reading and math labs for individually prescribed assistance.

In addition to academic classes, there are vocational and enrichment programs for students. Vocational programs include graphic arts, upholstering, small engine repair, service station attendant, auto-body repair and refinishing, and custodial services. Within the enrichment program, classes are offered in which everyone in the academic program participates, such as in physical education and the arts and crafts. Certain other programs have age or other requirements for attendance, such as driver education and GED preparation.

Students may attend regular school all day, spending one-half of the day in academic classes and one-half in enrichment programs; they may attend school for one-half day and vocational classes for the other half; they may attend vocational classes for a full day; or they may attend school for half a day and be assigned to a work crew for the other half. The last option for program scheduling is the one in which most residents participate. Students are assigned to classes for two-hour blocks of time, not all of which is scheduled for instruction. Students are provided with breaks during class sessions.

When a student first comes to the institution, he is sent to the diagnostic center where he is given an intelligence test and an oral reading test. Based on the reading-test score, the resident is given the appropriate level of the California Achievement Test. From these results the student is scheduled into a program. Usually the selection of a program is dictated by available space in the operating programs, since the institution is operating beyond capacity and is subject to dramatic changes in the size of its population. Eligibility for Title I is determined by the CAT pretest scores. When a resident is ready to leave the facility, he returns to the diagnostic center and is given a post-test CAT. This score is used to determine the academic progress the student has made during his stay.

Teachers decide by an informal assessment and meeting with the student whether he needs remediation in either math or reading and is eligible for Title I services. If he is deemed needy and eligible, he is referred to one or both labs for Title I instruction, usually for an hour a day. Once referred to either the reading or math lab, the student is given a diagnostic test to

determine if he is among the neediest of the needy. If it is determined that the student does need remediation, a program based on his individual needs is designed by the lab teacher.

In addition to the math and reading labs, there is another aspect of the Title I program within each of the academic classrooms. The reading and math lab instructors serve as liaisons between their own labs and the eight classrooms' Title I personnel. Title I-eligible students are identified and provided with additional instruction in reading and math by the Title I teachers and aides within the regular classrooms, under the guidance of the Title I lab instructors. Since nearly 90 percent of the students at this facility are eligible for Title I, it is very difficult to distinguish any differences between regular education and Title I within the regular classrooms. The only distinction observable was that Title I teachers and aides were prohibited from helping non-Title I students in the academic classrooms.

The reading lab receives twelve students from each of the learning labs. The students are usually assigned to the lab for two and one-half hours per week. Instruction within the lab is individualized, with one-to-one contact daily. The teacher/pupil ratio is about one to five. Various multi-media, multi-purpose instructional aids are utilized in each student's program, covering different subject areas. Once individual performance objectives are met, as evaluated by diagnostic testing in the reading lab every four weeks, students are referred back to their respective learning labs to participate in follow-up activities with learning lab Title I teachers. Individual performance objectives in the reading program are reviewed and updated weekly during a teacher/student review session.

Four groups of seven students come to the math lab every day for five days, for one hour of remedial instruction. The teacher-pupil ratio is about one to three. Equipment and materials used include a variety of audiovisual teaching aids and kits for multi-media programmed instruction; this program is developed by the remedial math staff and the regular classroom teacher in the student's learning lab. Both small-group and one-to-one instruction is provided.

To be eligible for Title I, a student must be two or more grade levels behind normal expectancy, as measured by the CAT. There are 432 students presently eligible for Title I, and 360 who actually participate in the program. Those eligibles not being served are not enrolled in the education program, and are therefore unable to avail themselves of Title I services. All of those who are eligible and enrolled in the education program participate, and stay in the Title I program until they leave the facility. This is dictated by the nature of the program. If a student is in the academic education program, he must be placed in one of the learning labs, and just by the nature of his eligibility he is considered part of Title I and thus is given attention and aid by one of the Title I personnel in that lab. Most students are not aware that they are distinguishable as Title I students unless they attend one of the specialty labs.

It was reported that the differentiation of Title I teachers and students from regular teachers and students was a source of conflict in many areas. All teachers were required to be group leaders and lead treatment groups for one hour every afternoon. In addition to this, teachers had to spend two to three hours a week in inservice training to learn group-leader skills. Because of state monitoring, Title I teachers were relieved of this duty. In addition, Title I inservice training is now offered only to Title I teachers, who receive travel, per diem, and release time to attend. If non-Title I teachers wish to attend, they must pay their own expenses.

Title I aides had previously been assigned to work in all areas, helping in both academic and vocational areas. However, state monitors now prohibit this work, and only allow them to be assigned to work with Title I students. Many teachers who had relied on aides (especially in the vocational program) were left with none. In addition, teachers report that they were left with no time for planning. They view the situation of the Title I teachers who have aides and free planning time with some resentment.

The openly recognized (and reported) problem with staff morale is of course due to many more factors than the problems experienced with the Title I pro-

gram. State plans for the usage of this institution differ almost yearly. For instance, institutional staff were given only a few weeks' notice that their institution would become co-educational. Furthermore, the size of the resident population often doubles without advance notice. The impact of such state-level decision-making on the operations of the educational program, and the morale of the staff, is dramatic.

Perhaps the best description of the teaching staff is that many appeared to be 'burned out'. Some teachers expressed the feeling that they could do little to alter the life chances of students or to remediate their severe learning deficiencies. A few teachers were observed to be openly dissatisfied, expressing to students how little they cared for them and for teaching.

Site Number 7

Located in a rural area and operated by the Youth Authority, this co-ed institution houses 400 adjudicated delinquents. One-half of the youths have had prior commitments to other state institutions, and the average stay at the institution is one year. Most of the residents are 15 or 16 years of age, and only ten percent of the population is female.

Although officially considered a minimum-security facility, only about one-third of the residents are allowed to walk freely from building to building. All other movements occur in group formation under the supervision of guards. No fences surround the compound, but resident cottages are always guarded and have locked metal doors. Girls and boys live in separate cottages and are kept apart at all times except during classes. Several guards are on duty in the school building and all the teachers have whistles in case they need help. Despite the security precautions, 60 escapees were reported to be at large in the community.

The institution employs 52 teachers, 26 treatment caseworkers, 41 administrative staff members, and 150 custody personnel, i.e., more than one guard for every three residents.

Entering residents spend two weeks in a reception unit where they undergo a series of physical, psychological, and intelligence tests. Residents who are identified as having serious emotional or behavioral problems are placed in a self-contained guidance unit for intensified treatment. A separate staff of teachers provide non-Title I instruction to residents of this unit. No formal treatment program is available for the residents who are not assigned to this unit. Because of this, units reported behavioral problems; students were often medicated by treatment staff. The teaching staff in this unit seemed to interact with students exceptionally well.

According to the EPA, students are assessed for the Title I program during testing at the reception unit. However, no academic distinction is made between Title I and regular education classes. Title I money is used to fund one-third of the entire education program, including vocational education and non-academic classes such as typing and home economics. In other words, one out of three teachers is paid by Title I funds, but these teachers do not necessarily offer remedial instruction.

A large amount of staff turnover is experienced yearly. The combination of staff attrition and a statewide hiring freeze has posed serious staffing problems. In an attempt to deal with this situation, uncertified paraprofessionals are being hired.

Students found to be reading at a first- or second-grade level are referred to a remedial reading program that is conducted by two teachers--one Title I funded and one state funded. These teachers use Title I materials (Systems 80, Hoffman Readers, and workbooks); they conduct their own needs-assessments, establish their own performance objectives, and evaluate each student's progress on a daily basis. When students can read at a fourth-grade level, they are phased back into their regular reading classes.

All students participate in the same math program at levels that vary according to pretest results. Instruction is based on the use of self-programmed booklets that are purchased with Title I funds, but the teachers are, more often than not, paid by state funds.

Other classes offered at this school are language arts, science, art, music, current events, cultural enrichment, typing, printing, auto mechanics, home economics, General Equivalency Diploma (GED) preparation, and a work/study course. A student who is enrolled in a class whose teacher happens to be paid by Title I funds is called a Title I student.

According to all respondents, discipline is a problem at this school. The students are poorly motivated; they constantly talk and fight with each other and walk in and out of the classrooms. Except during slides or movies, they are inattentive and unruly. One of the teachers said that the discipline problem has become much worse since the institution was made co-ed a few years ago. Teachers depend on custody personnel to help them control the students' behavior in class. However, custody staff members cannot discipline students by preventing them from attending class. Cottage treatment staff generally make decisions that restrict students or groups of students to their cottages.

The EPA makes most of the decisions regarding education programs, and is influenced by the instructions of the Youth Authority's education coordinator. The institutional director is not involved with the education program at all. Teachers are free to choose their own instructional materials and techniques. With the exception of the remedial reading and math programs, performance objectives are not established for individual students.

Although education is considered the main activity at this institution and all residents participate, the program is the subject of constant reorganization. Organizational requirements from the state change frequently, and have dramatic impacts on the delivery of educational services. For instance, a recent directive ordering decentralized educational units resulted in teachers taking on teaching and counseling tasks for which they had no training (and sometimes no desire), and in a lack of instructional resources and materials for some of the units.

Site Number 8

This minimum-security institution, located on the outskirts of a small town and administered by the state youth authority, serves over 200 adjudicated delinquents ranging from 10 to 17 years of age. Black, Hispanic and white ethnic backgrounds are represented in equal proportions among the predominantly male population. For most students at the institution, this is their first commitment. The institutional program is designed to handle all the individual needs of residents, and education programs are a major component of the 24-hour-a-day treatment program. There is a modern, non-graded, self-contained academic school, which utilizes a highly individualized approach to meet the needs of each youth. The correctional school is recognized as a separate school district and is state accredited for grades 1 through 12.

The general atmosphere of the institution is similar to that of a private school; there are no fences or guards, but student groups are very closely monitored. Private cottages house the students in small but comfortable single rooms. Students remain with their cottage peer groups for all activities--education classes, recreation, group counseling, and therapy.

The average length of stay at the institution is under one year, and most students tend to stay in one type of educational program for the duration. Students tend to be far below their grade level in reading and math achievement, and approximately 90 percent of the total population receives Title I reading and/or math services. For some students, low English fluency poses difficulties.

The institutional philosophy is to establish and maintain an alternative living and learning center rather than a punitive environment. This is not to say that students are without restrictions, but the focus of the program is on the development of internalized individual responsibilities and self-control. Important features of the institution's program include a diagnosis-oriented academic program with intense individual attention, active participation in statewide athletic competitions, a variety of other community-linked recreational activities, an all-encompassing treatment program, including daily 'positive peer-guided group interaction' sessions, and student councils.

The education staff consists of an EPA, twelve regular academic teachers, two aides, five vocational education teachers, a Title I coordinator, five Title I teachers, and seven Title I aides. All teachers have state certification, and the Title I coordinator has advanced degrees in remedial education. The overall teacher-to-student ratio is 1:8, and the Title I staff-to-student ratio is 1:4. The institution reports a high level of staff turnover (over 40 percent per year). More than one-half of the teachers, for instance, have taught at the school less than nine months. Reasons given for leaving were usually personal, such as moving to another area.

Communication between the administrative and education staff is reported to be good, by both teachers and administrators. Teachers meet daily with the EPA for a briefing, and they participate in programs dealing with diagnostic evaluation, inservice training, needs-assessment, and staff development activities. As far as overall program management and operation are concerned, decision-making seems to include input from all members of the teaching and treatment staffs.

Staff/student conflict, if serious, can result in isolation for students, but many opportunities exist for students to accept responsibility for their acts and return to cottages before disciplinary action is taken. Students in isolation are closely monitored (at least hourly) by treatment staff. Isolation does not last more than three days. The important objective of disciplinary action is for the student to understand his/her own behavior.

There is no evidence of gang or peer pressure in this institution. Students in general appear to be fun loving and to interact well. The main source of discipline is a student peer group guided by cottage treatment staff. These groups are an important part of all student functioning, and are integral in resolving behavioral problems.

Title I programs at the facility rely heavily on the diagnostic testing of all students. Initial I.Q., physiological, and basic-skill-level evaluations are conducted at a state diagnostic center prior to a student's entry into the

facility. Additional skill and achievement testing is conducted by treatment and educational staff members before the development of individual performance objectives and instructional plans.

All the information on each student--background data, test results, educational program objectives, methods, etc.--is kept on file in the school and is available to all staff involved in helping the student. Staff members (education, treatment, custody) also fill out frequent progress reports on each student. After each class, the teachers complete student progress logs--these are given to cottage treatment staff as a means of monitoring the students' individual and group behavioral progress.

Identified Title I students (functioning two or more grade levels below the national norm in reading and/or mathematics according to their expected grade level, and the Metropolitan Reading and/or Mathematics Achievement Tests) receive in-depth educational appraisals so that their learning processes will be expedited through individualized education plans. A posttest is administered prior to dismissal. The data obtained from these tests and student-teacher evaluations are used to determine the effectiveness of the project and to ascertain if the objectives have been attained. The Piers-Harris Self-Concept Scale is also given upon entry and dismissal.

The facility's educational objectives are to increase the participants' literacy level and their overall academic and social functioning. The curriculum includes science, social studies, English, cosmetology, homemaking, career awareness, remedial language arts, remedial math, several Title I and non-Title I lab classes, and physical education. Regular education, Title I, and vocational education are well integrated for the maximum benefit. The relationship between the teachers and students is very positive and constructive.

Title I supplements the regular program, and Title I students participate in both. All students participate in reading, math, social studies/history, and physical education classes. The lowest-level students generally do not take

science or homemaking classes, but participate in 'double-dose' reading and/or math programs. Higher-level students (Title I and non-Title I) do take science and homemaking.

Those students who evidence the greatest need for supplemental assistance in reading and/or math will be given priorities for participation in the Title I program. When a student reaches his expected grade level, he is moved back into the regular educational program and another eligible student takes his place in Title I classes. In order to provide Title I participants with more effective and individualized instruction, special remedial laboratories, each staffed with at least two Title I teachers, are scheduled daily for the lowest achievers in reading and math. The remainder of the Title I staff is scheduled in classrooms to work with the state-paid teachers and give special supplemental assistance to the identified Title I students. This instruction is given to students either on a one-to-one basis or in small groups of four or fewer. Each participant is diagnosed systematically and continuously.

A few of the students at the facility do not receive Title I reading benefits because they are operating at or near their expected grade levels. Title I math services are offered to only half of the student population, due to a shortage of math personnel. The education administrator indicated a desire to strengthen the Title I math program in order to serve more students. Apparently, an insufficient number of math teachers for three consecutive years has resulted in the provision of math instruction to a limited number of students.

The Title I coordinator is an extremely energetic and efficient individual who devotes most of his time to continuous monitoring and evaluation of all education programs and to the provision of technical assistance and inservice education. In addition to this ongoing monitoring, daily staff meetings are used as a means of reviewing overall program operations. Because of the constant, open and cooperative communication among all staff levels, most minor difficulties are identified immediately and dealt with before they become major issues.

For purposes of program evaluation, a needs-assessment of the total student population is conducted yearly. At this time, the expected grade level of each student according to his chronological age is assessed. Nearly all the incoming residents were functioning from two to eleven grade levels below the expected achievement level in reading and math. Specific Title I program objectives included making the following improvements between pretest and post-test (as measured by the standard achievement test): 50 percent of Title I students will demonstrate a gain of one month per month of instruction in reading, and 60 percent of Title I students will demonstrate a gain of one month per month of instruction in math.

The results of the program for the past year reportedly illustrate the overall success of the program: the average equivalency level improved by 1.5 grades in reading and by 1.1 grades in math. Calculated on a month-per-month basis, the improvement in reading and math in most cases exceeded that outlined in the program objectives.

Both the Title I and non-Title I teachers are firm believers that diagnosis, testing, and evaluation procedures are the only creative way to remediate students who have fallen behind in their schooling. Several teachers indicated that Title I had actually erased their preconceived ideas that most institutionalized youth were unable to learn. According to the Title I coordinator, one of the strongest aspects of the Title I program in this facility is that it has served not only to motivate students but to motivate teachers as well. Some teachers became interested in taking courses in remedial education. A lower teacher-student ratio, a rich variety of equipment and material, and inservice training seem to be the most salient features of the program. Staff members suggested that Title I services be offered to all students, that in-service training be extended to all teachers, and that the program also have the capacity to reach the non-English-speaking students.

Although education appears to be the major institutional activity, since classes and students are scheduled for the major part of their day, several factors pose obstacles to the provision of instructional services. A myriad of extra-

curricular activities, combined with a disciplinary system that restricts entire cottages of students from class attendance, reduce actual instructional time considerably. The desire of institutional staff to serve the many emotional, recreational and educational needs of students within the school day diminishes the amount of time individual students actually attend classes.

Site Number 9

This minimum-security institution, situated in a rural area, houses 500 residents. Most of the residents are adjudicated delinquents between 15 and 17 years of age; fewer than 10 percent were committed as adult felons. Most residents had histories of previous confinements. The average length of stay at the institution is eight months.

Institutional grounds are surrounded by a 15-foot fence and are constantly patrolled by guards who carry walkie-talkies but who do not wear guns or uniforms. All staff members and visitors are equipped with electronic 'beepers' that can signal a security guard from any location on site in case of an emergency. The school hallways are monitored by security staff while classes are in session and until teachers have left the institutions. Security officers, who double as youth counselors, are on duty in each dorm at all times. Residents always move in supervised groups from one activity to another; any resident not in a group must carry a pass. Residents are counted three times a day. A lock-up cell exists, but is rarely used. The average stay in isolation is one day.

The institution consists of modern one-story buildings, spread out over several acres. The major structures are an administration building, a large education center, a gymnasium, an auditorium, a chapel and four living units, each composed of two, fifty-bed dorms connected by a common dining room.

Residents are assigned to dorms on the basis of their geographic location prior to institutionalization. Each dorm has its own treatment team that consists of a team supervisor, two social workers, eight youth counselors, two academic teachers, and a vocational education teacher. This grouping is the focal point of all services provided by the institution. Each team is delegated considerable autonomy in planning and developing activities for its residence hall, and in designing and implementing treatment strategies for each ward based on clinical reports, counseling and the observation of behavior.

The education program is an integral part of the treatment program and functions within the same resident dorm structure. This means that there are eight small three-teacher school units within the institution. Each teaching team is departmentalized, with all students getting an equal amount of time in all programs and activities. Each residence hall is divided into three ability groups, and students attend classes according to these ability groupings. The stress is on basic-skills instruction, but educational goals are individually prescribed for each student during preparation for return to public schools. All students and staff members interviewed found the team approach very effective because it allows learning activities to take place among small groups of residents who can become well acquainted with each other. Staff members felt that this high level of interaction serves to lessen the chances of conflicts between staff and residents.

Although students reportedly attend class 28 hours per week, a number of factors were observed that interfere with actual class attendance and task-engaged time in the classroom. The behavior modification approach to discipline seemed, in part, to be responsible for some of the time loss. Inmates were granted the privilege of cafeteria duty or dorm clean-up based on good behavior. These students were often late to class or left early to perform their duties. Students appeared to be more concerned with earning points and gaining privileges toward release than they were with educational activities, which were not rewarded in a similar fashion. The fact that at least ten minutes at the end of each class period was devoted to "clean-up" activities served to further reduce actual instruction time.

Most of the actual instruction was conducted by resident teacher aides. Teachers were observed to function in more of a supervisory capacity, occasionally providing feedback on test performance.

In addition to regular education instruction, students receive instruction in physical education, music and vocational education. Students can be pulled from the regular education program and assigned to these other programs for a six-week block of time if teachers feel students will benefit from such in-

struction. Teachers are required to assign homework and monitor student progress during this time away from the regular classroom. However, the regular tasks in which teachers engage reportedly made it difficult for teachers to adequately monitor these individual students.

All students are evaluated both at the state reception center where they are first confined and at the institution. The needs-assessment results are incorporated into a prescriptive instruction plan that covers a six-month period. The progress of a student can be followed from day to day and adjustments can be made in the prescription, if necessary. All prescriptions are evaluated every six months. Through these assessments, students are selected for participation in the Title I program.

The instructional materials utilized in the educational program was the subject of some concern among teachers. It required that students jump from one specific skill function to another, often prior to mastery of the first. For example, practice tests in math simultaneously contained questions on division, multiplication, addition and subtraction in fractions, decimals, whole numbers and roman numerals. Teachers commented that this particular approach seemed more confusing to students than would a more hierarchical approach. It was apparent that students did not master lower-level math skills before attempting higher-level skills during the time they spent in the educational program.

The regular education staff consists of nineteen academic teachers, five instructors in industrial arts, four arts and crafts teachers, one teacher-librarian, one music teacher, four instructors in recreation and physical education, one supervisor of academic instruction, and one supervisor of correctional education programs.

Elementary and high school subjects are taught at both remedial and regular high school levels, depending on the functioning level of the students. Credit is granted to high school students at the rate of five semester hours of credit for each sixty-five hours of classroom instruction. A student must complete all course requirements and examinations to the satisfaction of the teacher

before credit is granted. He may graduate from high school by completing 190 credit units that include the courses required by the state Department of Education. Approximately 320 students are enrolled in Title I math and 275 in Title I reading. Due to a lack of space, the institution cannot offer Title I services to the entire population. The average stay in Title I classes is six months. The remedial program is paced to achieve two and one-half months of progress for each month of instruction.

The Title I staff consists of a supervisor, a diagnostician, three teachers, three assistants, and twenty-five resident aides. These aides were originally residents of other correctional institutions. After very careful screening, they underwent an intensive nine-month training program; successful completion earned them credit, parole, and their positions in this institution's Title I program. They now serve not only as positive role models for the students but also as remedial tutors.

Unlike regular and vocational education teachers, Title I staff members are not assigned to treatment teams. Title I teachers give students individualized remedial instruction in a large, adequately-equipped learning laboratory. Students are pulled out of their regular classes for this purpose. Title I assistants and resident aides work with individual students, either in their regular classrooms or in the lab. By offering training and supervision to the assistants and aides, the institution has expanded its Title I services: in effect there are thirty-one teachers instead of three. In spite of this maximization of teacher-student contact, however, one common complaint was that there were still not enough assistants to meet the individual remedial needs of students.

Communication among staff members should be enhanced by the treatment team approach. However, it was not apparent to observers that this was the case. Teachers did not appear to be familiar with counselors' names, or with the exact procedures within the residential dorms. The separation between Title I teachers and the regular education staff seemed to impede communication with the institution. Furthermore, communication between the institutional and the educational administrations was disjointed. Institutional directives which

were counter-productive to educational objectives were often reported to be received, usually without the prior consultation of educational administration.